

International Education Year
Seminar on Primary
and
Work-Oriented Education

*A Collection of Papers to be discussed at the
Seminar*



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FOREWORD

This volume contains the full text of the papers submitted for reading and discussion at the National Seminar on Primary and Work-Oriented Education held on 9th, 10th and 11th November, 1970 under the auspices of the National Council of Educational Research and Training. The areas covered include Gandhian Values in Education, Work-Experience, Science Education, Curriculum at the Primary Stage etc. The papers are written by persons who are known already by their contributions

The collection of papers is being published as a bound volume to make it useful to libraries and other organisations. Reprints of individual papers have also been made available to those interested in specific areas.

National Council of
Educational Research and Training,
14 October 1970,
New Delhi-16

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Director

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NATIONAL SEMINAR ON PRIMARY
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WORK-ORIENTED EDUCATION

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EDITORIAL

The present working papers for the Seminar on Primary and Work-Oriented Education are being brought out in the International Education Year. The range of the subjects being covered is nearly as large as the scope of the seminar. They have, however, been prepared and designed with a specific viewpoint. The purpose of the present publication is that it may form a reference material for future scholars to carry out their researches and for the practising teachers it should contain sufficient material for experimentation.

It is a truism that in India countless millions go without education. The reasons are numerous but one of them is this that education given to children in most of our schools is irrelevant and uninteresting. Some of the papers included here throw considerable light on this problem from all aspects—curriculum, health, financial etc. In what they say may not look very new but what we seek today is not novelty in thought but solemn dedication to a cause and eventual action.

Time and again few things have been repeatedly told. For instance, we have been told that education is an investment, that education in order to be useful should be based on work and that work should not be far removed from reality; that without a set of proven values we cannot accomplish much in a world of unrelieved tension etc. A few papers have attempted to direct our attention to these fundamental problems also.

Other problems that these papers try to cover pertain to language teaching, evaluation, simple yet highly advanced techniques of teaching viz , programmed learning, education of the handicapped, and scouting and training talented teachers. Two papers are based on actual research studies one trying to balance the other about the efficacy of pre-primary education. There are grounds to believe that both need re-study and re-validation of data. But in themselves they contain interesting pieces of information. Besides this there are

papers on history, philosophy, science and even future projections in primary education. In brief, as I said earlier, we present primary education in its totality.

In the end, I wish to express here my appreciation and gratitude to all the contributors of this small volume. I also wish to record my deep sense of obligation to my colleague, Shri D C Upreti, for his assistance in the production of this publication. For the secretarial help I am indebted to Shri Om Prakash Arora of my Department.

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Pre-School Education: Yesterday, Today and Tomorrow

DR. RAJALAKSHMI MURALIDHARAN*

ORGANISED PRE-SCHOOL education was unknown in India almost upto the end of the 19th century. It is around this time that the European missionaries introduced the concept of kindergarten education for the first time. In the nineteen twenties the Nutan Bal Shikshan Sangh was set up in Maharashtra to work for the cause of Child Education especially at pre-school age. In the late nineteen thirties Madame Montessori visited India and gave a fillip to the cause of childhood education. Montessori schools and Montessori training courses sprang up all over the country, particularly in Madras, Maharashtra and Gujarat. Gignubhai Badheka and Tarabai Modak in the western India and the Arundales in the south were some of the pioneers who took up Montessori Education. Since Independence the Government of India started taking more interest in early childhood education. The Central Social Welfare Board was set up and one of its aims was to promote Balwadi education in the country. The Balasevika training programmes were started after a while to train balwadi teachers. Several voluntary organisations stepped in to provide a momentum at this level of education. After twenty-three years of independence we have been able now to familiarize people with the concept and need of pre-school education. Irrespective of the name such as, nursery school education, Montessori education, kindergarten education or balwadi education what parents wish is that their children in the age group of 3 to 5 should be exposed to some form of organized education.

Unfortunately, India has not been able to provide these opportunities even to a small percentage of children in this age group. Only less than a million out of the total population of 38.6 million 3 to 5 year olds receive any kind of pre-school education. Yet the research studies indicate that the early years are most crucial for the development of the child; that about 50% of the total intellectual development of the child

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is completed by age 4 and 80% by age 8; that environment exerts its maximum effect during the earlier years and the consequences of deprivation in the first five years of life are much greater than those of deprivation in the later years. Thus it shows that the level of ultimate development and achievement is practically fixed by the experiences given during the early childhood.

The majority of Indian children come from disadvantaged homes. Their parents are able to give them very little stimulation. Their language ability is poor as their vocabulary is limited. The language they listen to is mostly incorrect and the opportunity that they get to express themselves is minimal. They hardly receive any encouragement for independent thinking or problem solving. It is such children who need compensatory education in schools but seldom do they succeed in having it. The net result therefore is that the most crucial period of childhood during which development could be maximized is thus lost to the nation.

Many of our children who come to class I enter school without having developed any kind of readiness for schooling. A study conducted by the NCERT showed that in the two groups of pre-school children who were tested, in Delhi, one drawn from the urban nursery schools and the other drawn from the rural areas of Delhi—unexposed to pre-school education, the urban children were able to name all the basic colours in the pre-school years whereas the rural children were able to name only black; the rural children found extremely difficult to name pictures or even to tell the use of objects shown. Their concept of number was also very poor. Such children who are thoroughly unprepared for schooling cannot be expected to meet the rigours of the primary school and therefore it is no wonder that they either repeat the class or leave school altogether.

Pre-school education thus should be viewed from two angles : (1) it provides maximum enrichment when development is at its fastest and thus ensures optimization of development ; and (2) it reduces the percentage of wastage and stagnation at the primary stage. From both these angles , it is obvious that this stage of education is important and the need for expansion of such facilities is immediate. But the problem is one of finding adequate resources. It is certainly a hurdle but to my mind not one which cannot be overcome. Some allocation, of course, will have to be diverted to it. Yet it need not be a stupendous expenditure. Ways and means could be thought of for reducing the cost of pre-school education. Some of these could be :

- (1) To devise equipments out of indigenous materials, which are easily available
- (2) To involve the community in the endeavour and enlist their support in cash or kind for this movement

- (3) To train local women through short-term courses for teaching the young children, whenever trained teachers are not available.

In this connection the experiments of the states of Tamil Nadu, Maharashtra and Rajasthan need particular mention. Tamil Nadu has successfully experimented with training local women as balwadi teachers. Maharashtra and Rajasthan are trying out the experiment of running pre-schools with the aid of teachers of class I. The duration of class I has been shortened in these states and teachers are required to spend the remainder of the time with pre-school children.

If such methods are attempted elsewhere as well, the cost of pre-school education should not be too prohibitive. Apart from the cost involved, there is another question that should be looked into, namely, the objective of pre-school education. Very often one finds that it gets included under Social Welfare Programme and there seems to be current a general opinion that pre-school education means only child care plus some music and stories. On the other hand, there is a school of thought which holds that pre-school education means the teaching of the three R's. It is essential that one takes a firm stand and declares that pre-school education is certainly not just child care, but neither does it aim at the teaching of the three R's. It should aim at a programme which ensures the overall development of the child, physical, cognitive, social and emotional. Every opportunity should be availed of to widen the experiences of children. What is important is to see that the child understands his environment. The cognitive component should certainly be high considering the fact that intellectual development is very fast at this stage. Opportunities to listen to good language, to use language freely, to get a firm grip on pre-number concepts such as differentiating between big and small, thick and thin, seriating in terms of sizes, classifying in terms of shapes, forms, etc. should form the core of the curriculum. The other aspect that should also be stressed is the development of desirable social attitudes and values. To put it briefly, specialists in child development and pre-school education should be involved in planning adequately challenging programmes for the pre-schoolers. It is unwise to bracket pre-school education with social work or social welfare.

The crux of any programme in education lies in teacher education. This holds true in pre-school education as well. In this respect the Education Commission had recommended the setting-up of Pre-school Development Centres in rural areas which should function as the training centres for the rural women. It should not only undertake training but should also provide facilities for parent and community education. This recommendation is one with a great deal of potential and needs careful examination.

In view of the present problem of inadequate number of trained teachers, one may plan mobile nursery schools. A fully equipped van with all the necessary equipments and with one trained teacher may go and work in two or three villages for one or two hours and thus make pre-school education more accessible for a large number of children.

Recent experiments in other countries have shown that television is a very effective medium for pre-school education. In view of the proposed operation of satellite TV network, India should soon have enormous potentialities for expanding to set up a small cell devoted to the planning and preparing of TV programmes for children. Such TV programmes should cater to the needs of a large number of children.

Thus there are ways and means of expanding facilities for pre-school education. One need not have the misconception that it is exorbitantly expensive. What is immediately important is careful planning of programmes and the preparation of teachers. A fully trained pre-school teacher should receive as much remuneration as a trained primary teacher. If this is ensured it should attract more talented teachers to pre-school education. In areas where trained teachers are not easily available, we may employ local women after exposing them to some minimum training. At the same time opportunities should be made available to those women to improve their qualifications, if they so desired, so that in course of time they get themselves fully trained and become eligible for higher remuneration. With adequate support from the community it should not be too difficult to make pre-school education available to the rest of the millions of children who could not otherwise obtain it.

Effectiveness of Kindergarten Education

DR K. G. DESAI*

Problem

Comparison of levels of achievements in academic subjects and of developmental tasks of primary school pupils who have attended a kindergarten school for two years before joining primary schools with those who have not

Introduction

Pre-primary education has been flourishing in India these days. Because of the influence of Madame Montessori who lived in India during the Second World War, Balwadis or Balmandirs had a good start in Gujarat particularly Gijubhai Badheka in Bhavnagar championed the cause of pre-primary education in this part of the country and as a result kindergarten schools of two years' duration were established in many cities of Gujarat as early as in the thirties and have gone on multiplying. There is hardly any town of 10,000 population which does not have a kindergarten school at present and many villages of 1000 population also have one. The statistics given in the Kothari Commission report are perhaps, a gross underestimate because there are a number of kindergarten schools which are not registered anywhere. It is difficult to collect statistics of unregistered institutions, but it is possible that they might outnumber the registered ones at least in this part of the country.

Most of the Balwadis, however, are poorly staffed and ill-managed. Their usual function is to keep children engaged for about four hours a day in some sort of activity so as to free their parents from their burden. However, it must be said to the credit of the educated parents that they have felt the need for some sort of pre-primary education for their children. Many of them feel that the State should undertake the responsibility of running pre-primary schools. The Kothari Commission has

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considered this view but has recommended that the establishment and conduct of these schools be left mainly to private enterprises at present because of the paucity of adequate resources and other priorities like primary education.

This question needs to be solved academically, however. If pre-primary education is effective in building the foundation of education or in motivating the child for effective study later on, it should be the responsibility of the state to make adequate provision for it since there is no better investment of nation's resources than that in education. If, however, pre-primary education is not effective in preparing a good foundation for further education, it should be left entirely to the private enterprise of local authorities to provide for it.

The present investigator wanted to find out an answer to this question and therefore planned an experimental study described here under .

Hypothesis to be Tested

In order to pin-point the study the following hypothesis was put forward :

The levels of achievement in academic subjects and of developmental tasks to be learnt during the primary school of the pupils who have attended a kindergarten school for two years are no better than those of the pupils who have not attended a kindergarten school before joining the primary school.

In setting up this hypothesis the investigator is of the opinion that the things to be learnt during the primary school need a certain maturity and any schooling before the children attain this maturity goes in vain. If this hypothesis is correct, those children who have had the benefit of kindergarten schooling for two years should not show better achievement in primary school subjects than those who have not had it.

It is very obvious that if the achievement of children reading in the first grade of the primary school is studied, those with kindergarten education shall show better progress than those without it . It was, therefore, thought advisable to study the relative achievement of both types of children when they reached grade IV, so that those who joined primary school directly may get enough time to catch up with those of the other type. Grade IV is the stage when children can be subjected to objective testing. Children below that level usually do not take tests properly. Moreover, three years' period is not long enough to wipe out the effect of two years' pre-primary education, if any . And if two years' kindergarten schooling does not have appreciable effect on pupil's learning for a period of three or four years, then that schooling is of not much use.

Plan and Procedure

It was planned to set up two groups of pupils studying in grade IV matched one to one on the basis of IQs and to administer achievement tests in language, social studies, science and mathematics and to compare their average scores on these tests. For other developmental tasks, it was planned to get the personality ratings by the teachers who had come in close contact with these pupils and to compare averages of the two groups.

As per this plan, the following procedure was adopted :

1. Five primary schools of good standard having their own kindergarten classes of two years attached to them were selected for the investigation. One more primary school which has no kindergarten classes attached was also selected for the purpose.
2. Two lists of pupils studying in grade IV in these schools (i) who had two years of education in the kindergarten class, and (ii) who did not have kindergarten education were prepared.

In the five schools with kindergarten classes attached to them, only those pupils who had attended kindergarten classes of the respective school were selected. This was done to eliminate teacher, school and environment variables and to ensure that all children had the same teachers to teach them and the same type of environment.

In the sixth school which had no kindergarten classes of its own, the group consisted of pupils who had attended all sorts of balwadis and were taught by different teachers. This was done to study the effect of teacher, school and environment variables.

3. All pupils of the two groups were administered J.M. Shah's Gujarati adaptation of Stanford-Binet 1960 revision. This is a recently adapted intelligence test standardized on Ahmedabad population.
4. Two groups of pupils (i) having kindergarten education, and (ii) not having any kindergarten education were set up in each of the six schools matched one to one on the basis of IQs.
5. Four achievement tests in Gujarati, Social Studies, Science and Arithmetic covering the new syllabus introduced this year in grade IV, were constructed and standardized. A personality rating scale covering the remaining testable developmental tasks was prepared.
6. The four achievement tests and a handwriting scale standardized by the present investigator were administered to pupils of both the groups and their individual scores on the tests were obtained. The personality rating scale was explained to the teachers who had come in close contact with the pupils and they rated the individual pupils on the scale.

7. Means and standard deviations of the two matched groups in all the six schools were calculated. The SEs of the difference between the means of the two groups were calculated and the significance of the difference was tested by the 't' test.

The Sample

Table 1 shows the schools selected for the investigation and the total number of pupils of the two categories in each of these schools as also the number of pupils matched one to one in the two groups.

TABLE 1
Schools and the Sample of Subjects of the Investigation

Sr. No.	Name of the School	No. of pupils whom intelligence test was administered		Sample for experiment	
		(Group A (with K.G.))	Group B (without K.G.)	Group A (with K.G.)	Group A (without K.G.)
1.	Noctan Vidyalaya	26	15	15	15
2.	Navchetan Primary School	17	13	10	10
3.	Unnati Kumar Mandir	25	14	13	13
4.	Saraswati Kumar Shala	28	15	15	15
5.	Diwan Ballubhai Primary School	15	21	14	14
6.	H.K. Experimental School	48	20	25	25

All these primary schools are situated in Ahmedabad city and are of good standard. They are run by private trusts. The first five have their own kindergarten classes of two years' duration. The last one is attached to a primary teachers training school and has no kindergarten classes. Some of the pupils who join this school had attended different kindergarten classes in the neighbourhood.

Group A in the first five schools is selected from only those pupils who attended the kindergarten classes of the same school.

TABLE 2
Summary of Results

No. of equivalent Groups	Subject on which compared	No. of significant D_M		No. of non-significant D_M
		At .05	At .01	
6	Language	1	1	5
6	Social Studies			5
6	Arithmetic			6
6	Science		1	5
6	Handwriting			6
6	Personality Traits	2	1	3

1. There were six pairs of equivalent groups in this investigation and they were compared on achievement in four subjects. Thus there were twenty-four results. Out of these twenty-four, only three differences in mean scores are found significant either at .05 or .01 level.

2. None of the six schools showed any significant difference between the handwriting of the two groups.

3. In the case of the personality traits for which the rating scale was prepared, three schools showed significant difference between the two groups and three did not show any significant difference. In two schools, the pupils with kindergarten education were found better on the rating scale, while in one school, those without kindergarten education were found better. Thus the evidence is inconclusive on the whole.

Conclusion

The evidence collected in this investigation tends to uphold the hypothesis with which it was begun. It is, therefore, concluded that the levels of achievement in academic subjects and of developmental tasks to be learnt during the primary school, of the pupils who have attended a kindergarten school for two years are no better than those of the pupils who have not attended a kindergarten school before joining the primary school.

Recommendation

As two year's kindergarten education does not help a child in most of his tasks in the primary school, as found in this investigation, the demand that the government should shoulder the responsibility of providing pre-primary education does not bear academic support. It is not the contention of this investigation that pre-primary education has no value. It may be helpful to the child in social development for which the results of this investigation have been inconclusive. It would be a better policy to leave pre-primary education to the private enterprises.

Limitations

This study has been replicated in six different schools and so it has hardly any limitation of sampling. However, since the intelligence test was administered when the children were in grade IV, it can be argued that those who had two year's schooling in kindergarten might have got some advantage over those who had no such education to score better on the items of the intelligence test also. Theoretically, therefore, matching of two groups should be done when the children

are old enough to join kindergarten schools which is obviously not feasible. The test can be applied to those who join kindergarten schools but those who do not are difficult to be identified for intelligence testing

Effect of Pre-School Education on the Future Educational Development of Children

INDIRA MALANI*

TRADITIONAL METHODS of education have not proved to be effective for primary education. Possibly, the major reason for this is that both the curricula and methods prevalent in primary schools do not take into account the physical, social-emotional and intellectual needs of children. The structured atmosphere of the classroom is boring to the child and very little meaningful learning takes place in this context. The existing syllabus of grade one is framed in such a manner that it assumes that a child has certain skills and has developed specific precepts and concepts which are pre-requisites for building the educational edifice. However, these assumptions are belied by one close look at children in grade one, for most of them do not have the basic mental and emotional equipment necessary for being able to benefit from formal schooling.

There are two major approaches for tackling this problem. One approach would be to prepare children during the first few months of grade one for formal schooling, by providing them with social, emotional and intellectual experiences which would equip them to cope with the demands of classroom learning situations as they exist today. This would necessitate a certain amount of change in the present primary school set up particularly in grade one, with the hopeful expectation that over a period of time methods of teaching children in the pre-schools would be carried over to primary schools specially in grades one and two. The changing of the curriculum and methods of work in primary schools is a very relevant issue. But the adoption of these measures would not necessarily ensure that children will realise their maximum potential for the simple reason that attitudes towards

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learning and certain conceptual frameworks have already been acquired before a child enters school.

The second approach would be to expose children to a variety of experiences before they enter grade one as a result of which they develop to a point emotionally and intellectually where they would be able to benefit from formal schooling; in other words, first ensure that they are ready for school, and then admit them to grade one. The second approach has the added advantage of taking children in hand at a younger age when educationally they are most vulnerable. The mounting empirical evidence points unmistakably in one direction that the major part of an individual's development and particularly intellectual development takes place before he enters school. As the pre-school years constitute the most important segment in intellectual development, there is a growing awareness of need of universal education beginning at least at age four if not earlier, for sowing the seeds of motivation for academic achievement and intellectual and social competence.

Although adequate empirical evidence for the advocacy of pre-school education still remains to emerge, and analysis of core problems related to educational development in early childhood and the relevant studies thereof, would indicate the thrust of the available evidence. Some of the core problems related to pre-school education are as follows :

1. What is the effect of pre-school educational programmes on the development of intelligence and scholastic achievement.
2. If odds seem to be strong that IQ and school achievement can be boosted, to what extent is this possible and how stable is the outcome ?
3. Do these programmes have an effect on the relationship between potential ability and actual performance?
4. Is it possible to effect a change in the process of achievement as a result of pre-school developmental stimulation programme?
5. How do the open ended systems of exposure reality dimensions compare with structured experimentation processing strategies? How meaningful will it be to evolve a combination of both?
6. By providing adequate educational opportunities at the pre-school level will it be possible to narrow the limits of variation in intelligence?
7. If pre-school instruction does not have any long term effects, but has immediate value for the child in that it helps him to have a better awareness of his environment and prepares him

for future schooling and social interaction, in terms of cost benefits how effective will these programmes be?

8. Should programmes for three, four and five years old be suitable for them from the developmental standpoint or be an extension downward of programmes for children in grades one and two?

These core problems of early childhood education have been studied and evaluated in different frames of references. The major trends are as follows :

- 1 The advocates of genetic viewpoint argue that although environmental deprivation may result in the child not realising his inherent potential, specially devised programmes for educational enrichment will not help the child in accomplishing over and above that potential. In the educational sphere this represents the maturationist line of thinking. Educational implication of this line of thinking is that the school environment should provide opportunities for the abilities to unfold themselves. Proponents of this view also advocate focusing on teaching specific skills and developing educational methods based on other mental abilities besides IQ. They argue that teaching associative skills other than cognitive and conceptual skills would be more meaningful.
- 2 The second line of thought accentuates the importance of training. This approach emphasises that the business of school instruction is the development on cognitive and social skills. In the area of pre-school education this idea has been worked out in great detail by advocates of a structured approach.
- 3 The third stream of thought is based on the interactional approach. There is evidence of increase in the development of brain structures following enrichments of early experience. Physical development of the brain is directly influenced by its information processing activities. Even discoveries involving DNA and RNA phenomena imply that human organism is not programmed to the extent that the behaviour is the outcome of built-in mechanisms and that it is possible to effect changes in neuro-anatomical, neuro-chemical and bio-chemical functions as a result of variation in environmental situations. In education this line of thinking implies that the job of the educator is to foster interaction between the child and his environment and nurture the cognitive and affective structures which emerge as a result of organism-environment interaction.

Several pre-school intervention programmes have been in vogue during the sixties varying in theoretical assumptions, conceptual

frameworks, general planning and implementation techniques, length of intervention and the methods of follow-up testing. Within this divergence there is evidence of several points of convergence. These are as follows :

1. The earlier the intervention, the greater the gain even though the gains may taper off in course of time. Programmes initiated for four years olds show better results as compared to programmes for five year olds
2. The initial ability of children is a very significant factor. Intervention programmes have been most effective with children who are moderately affected as a result of environmental deprivation.
3. Comparison of different curricula groups in carefully designed studies indicate no differences in the achievements of children of different groups and makes one wonder how meaningful is the quest for specific curricula for pre-schoolers?
4. All effective pre-school intervention programmes have emphasized language development and provision of a rich environment where interaction is stimulating to the child. This calls for a measure of individualization of instruction for bringing about an increase in the child's overall educability.
5. After a child has been motivated, language development stimulated and interaction established with the environment, precise techniques of work are required to sustain the initial gains.

In the current research studies in pre-school education one comes by over-statements and mis-statements by zealous advocates of pre-school intervention programmes on the one hand and genetic hereditability of mental ability on the other. For proving the point that pre-school instruction has lasting effects upon mental growth and development, evidence based on longitudinal studies is required.

However, in the absence of this kind of evidence the data provided by intervention programmes indicates that even if pre-school education may not succeed in raising the IQ, it certainly enhances readiness for schooling and promotes achievement by providing conditions for satisfactory learning where the child develops the ability to engage in self-instructional activities.

It may not be possible to have pre-school in very large numbers due to financial difficulties. But there are other ways of reaching the pre-schooler in his home and community. It is imperative that during pre-school years human feeling and learning be viewed as inseparable. As Piaget has put it very aptly there is evidence of ele-

ments of feeling even in the application of strictest logic. Methods of educating the pre-school child and evolving strategies for the same, need to be viewed in the frame-work of learning being both on emotional and intellectual experience.

Community Involvement in Pre-School Education

MINA SWAMINATHAN*

I. Reasons for Community Participation in Pre-School Education

1. *Educational importance of this period of life* : Recent studies have clearly demonstrated the developmental importance of the first eight years of life, especially the first five years, and their vital educational significance. At the same time, it is unlikely, in view of the vast dimensions of the problem, that the State can provide sufficient resources for this in the foreseeable future and hence the need to raise community resources.

2. *The nature of the curriculum* : As there are no set subjects at this age, but a curriculum based on developmental experiences, all kinds of articles can be used as educational media, provided they are well handled. Hence, inexpensive equipment and supplies can be provided through community collection and donation drives.

3. *Importance of interaction with adults* : Not only is the quality of teachers important for correct development at this age, but so also is suitable interaction with adults in the home, especially parents. Parent involvement and parent education are vital in view of the dominant role of home and community in child development at this stage, and hence parents must be reached by all possible avenues.

4. *Social change focussed on the pre-school* : The parent education programmes can become the basis for widening programmes of social change and social action.

5. *Concern of the wider community* : Community cooperation is a wider term than parent cooperation, and allows for the participation of all members, of the community, some of whom may have special skills to offer. The broader definition enriches the programme.

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II. Community Pre-School Programmes in Urban Areas

The programme can be based on the following principles .

1. *Volunteer services* In the urban areas, we can draw upon the services of a large number of educated women, with under-utilised time, talent and skills. Good organisation is the key-note for the mobilisation of the services of this group. The quality of teaching and the effectiveness of the professional teacher can be strengthened by training volunteers to perform a variety of specified tasks. These people may either work as volunteers, in which case not only educated unemployed women, but students will also be available under the National Social Service Scheme. Or, they may be given more intensive training as paraprofessionals, and given employment and modest honoraria. The choice would depend on the fund-raising abilities of the organising agency, among other things. Volunteers and paraprofessionals would assist the core professional teacher in any case.
2. *Low-cost equipment* : Large amounts of used toys, games, educational materials, and also household articles, waste materials etc would be available. Besides imagination and resourcefulness, it needs understanding of the developmental needs of the young child and training and skill to design, assemble, and construct the necessary items of equipment at minimum cost, using waste materials, and improvising cheap substitutes wherever possible. Publication of guides for the preparation of low-cost equipment would be helpful in enabling both professional and volunteer staff to understand the processes involved and to produce good results. Such publications can be undertaken based on the work already done in this area.
3. *In-service training and supervision* : Because of the dependence on volunteers, paraprofessionals and improvised equipment, it is very important that the programme be worked out and closely supervised by professional staff at every stage. Besides brief orientation courses for volunteers, there must be regular arrangements to bring them together, discuss and review problems, and provide further guidance. Similarly, besides the regular staff improvement programmes for the core professional staff, there must also be provisions to guide the teacher in working with volunteers and using them in the best ways.
4. *Other community participation* : This would include parent education programmes, fund-raising, and publicity and also participating in the management of the school.

Problems

The main problems would centre around the following :

- 1 *Volunteer services* : Selecting, orienting and coordinating the volunteer, arranging for regular review, reorientation and evaluation, maintaining continuity and interest, keeping up morale and arranging for suitable rewards, integrating volunteers into the programme, job descriptions, staff-volunteers relationships are some of the problems which would need careful study, planning and management.
- 2 *Professional guidance* : This is necessary for initiating projects, equipping the school, and guiding both teachers and volunteers. It can be done partly through suitable literature, and partly through short courses and occasional supervisory visits. This is necessary if the pre-schools are not to degenerate into mere child-minding centres, but become educationally worth-while institutions.

III. Community Pre-School Programmes in Rural Areas

The special features of community pre-school centres in the rural areas would be :

1. *Staffing by paraprofessionals* . This would involve selecting and training local women with very little formal education, and following up with regular in-service guidance, and refresher courses at regular intervals. Volunteers services may be used, if available.
2. *Low-cost equipment* : More dependence will have to be placed on designing and preparing simple improvised equipment using locally available labour and materials, and adopting indigenous materials and ideas as far as possible.
3. *Community sponsorship* : Local resources in cash and kind must be raised for partially meeting the needs of equipment, and where possible for paying honoraria to the paraprofessional staff. Community resources in the form of labour and materials would be especially helpful in building up nutrition programmes as this leads to much informal education.
4. *Multi-agency service* : The assistance of various technical and professional services and departments must be brought together to make the pre-school the focus for an integrated programmes for the health, welfare, and education of the pre-school child. The assistance will be in training, in-service guidance, and providing requisite materials and guidance for health, nutrition and education programmes

While this scheme will have many advantages such as low cost, saving of time and resources, local involvement, stability and adapta-

tion to local needs, it will also present certain special difficulties and problems. Besides those mentioned earlier in connection with urban programmes, three special areas will be briefly considered here.

1. *Community leadership*. The main problem is the development of a community leadership which is at the same time, strong, stable, skilled and interested enough to sustain the programme effectively over a long period. Initial motivation is important, so also is the sort of guidance received from the external agencies involved which can do much to bind together and train the group to work effectively together. The usual dangers of local vested interests must also be guarded against.

2. *Programme quality*: When working with staff of low educational qualifications, limited vision and brief training, the greatest danger is of dilution of quality. The length and intensity of the initial training period, the frequency and intensity of subsequent supervision and the frequency and regularity of refresher courses and other stimulating and enriching experiences are very important in maintaining standards. It is well to be prepared for an unusually high ratio of supervisory time and staff.

3. *Parent education*: This must begin by convincing parents of the value of pre-school education, and this can be done only by demonstrating the effects on children. Effects will be negligible unless the educational content of the programme is good and hence this is another vital reason for stressing the quality of the programme. At the same time, the pre-school can be a centre from which a practical programme of adult education radiates outward—including and beginning with useful and related skills and crafts such as health and hygiene, nutrition, mother craft and child care, etc., for mothers and moving on from there.

IV. Conclusion

If pre-school education is to be developed on the massive scale required now, heavy dependence on community effort will be necessary. In order to succeed, it is necessary to be aware of the difficulties involved and to place particular emphasis on certain new approaches.

1. One of the main tasks of Government will be to activate community organisation and mobilise community resources. This implies a multi-agency approach, using the techniques, insights and methods derived from education, extension, social work, etc., in order to provide the leadership base necessary for this development. Multi-disciplinary approach at the academic and planning level is equally important.

2. The second major task of Government will be to provide for the training of various kinds of personnel and to encourage a flexible

approach in their use. The personnel would include supervisory and extension staff, full-time teachers, part-time workers, volunteer assistants and paraprofessionals. The ways in which the services of these various personnel could be combined may vary from project to project.

Educationally speaking, if the most precious years are not to be wasted, community participation must seek to fill the gaps. This participation can itself be a form of social action, leading to further social change. It can set up new patterns of interaction which enrich child, family and community, and thus become a true educational process, educating both teacher and the taught.

Relevance of Basic Education to Contemporary India

DR. SALAMATULLAH*

It is only appropriate for the National Council of Educational Research and Training to organise a National Seminar on Primary and Work-oriented Education as a part of the celebrations for the International Education Year. For, primary education is now recognized as a birth-right of the citizen in all civilized countries of the world. Further, primary education is looked upon as a necessary condition of growth and development in all fields of national life. The idea of the National Council to hold the seminar on this theme is all the more commendable because it is intended to highlight the Gandhian values and their importance in the field of primary education. For, it was Gandhiji who was initially responsible for the formulation of the concept of Basic education—an education which was later accepted as the national pattern of primary education both by the Central and State governments in our country.

It is, therefore, quite in place to point out briefly the role Basic education was to play in the Gandhian scheme of things. Gandhiji visualized a world order which should be free from exploitation and violence, so that brotherhood of man may prevail and man may realise himself both spiritually and physically. The greatest obstacle in achieving such a world order, according to him, was the concentration of political and economic power. He saw that the only remedy of the ills from which the contemporary world was suffering lay in re-establishing autonomous village republics. These idyllic institutions could put man again on his feet. Here each one would work for all and all for each. It would demand bread labour from everyone. Self-sufficiency would be the keynote of such an organization. Thus, the door of exploitation and the resultant human degradation and violence would be closed forever. Service rather than self-aggrandizement would be the

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motive force for the individual's endeavour. 'Plain living and high thinking' would be the motto of such a society. In short, it would pave the way for establishment of the Kingdom of God on earth.

Gandhiji envisaged education which would be consistent with his philosophy as outlined above. Accordingly, the aim of education should be to draw out what is best in the individual, that is, to help him to grow to his fullest status in all respects—body, mind and spirit. Gandhiji believed in the innate potentialities of man. The task of education is only to provide suitable conditions for the unfoldment of these potentialities. He condemned the prevalent system of education as not only wasteful but positively harmful, for it exerts a crippling effect on physical, mental and spiritual growth of children and youth. He would characterise what goes on in our schools and colleges as a training in literacy rather than education; and to him literacy was not the end, not even the beginning of education.

Gandhiji advocated that the aim of education, namely, all-round development of the individual, can be achieved only when it is imparted through a village craft in such a way as to pay its own cost. He called it self-sufficiency of education. Children should be made to realize from the very beginning that real honest work is an obligation. They owe it to themselves and to the community they belong to. So they should be active participants in the educational endeavour which is intended to improve the quality of living, and that they are not solely at the receiving end but are also contributing their mite to the collective pool. He would argue that unless individuals learnt to pull their own weight, to produce what they need for their own use, they cannot resist the temptation of pressing others into their service by hook and crook. If we wish to do away with the tendency of living like parasites on the labour of others, we have to cultivate in men respect for labour from their early childhood. And this cannot be achieved in any other way but by initiating them, while they are young, into the world of work into activities which are directly concerned with producing the necessities of life. This will tend to create a sense of confidence and an attitude of service among the rising generation. Thus educated children are likely to grow up into men and women who will be at peace both with themselves and the world.

To Gandhiji, it was not a matter of expediency but a matter of conviction that education must be self-sufficient. This was the only kind of education which would fit into his scheme of things, conform to his world-view and help to bring into being the type of society, he envisaged not only for the Indian people but for the whole mankind. Gandhiji envisaged that the craft-centered education would, consequently enrich the rural life by raising a generation of young men and women dedicated to the ideal of community development. Thus, the present

trend of migration of rural youth to cities would be restricted and the process of urbanization retarded and the attendant evils of overcrowding avoided. In short, this kind of education would solve many of the socio-economic and political problems of the modern age.

Gandhiji pleaded for village crafts to be made an integral part of education not only to train students in skills and techniques of production but also to develop them intellectually and socially. All the processes of a craft should be used to promote what is known as scientific attitude in the student. That is, he should not learn the tricks of the trade, in a mechanical fashion. On the contrary, he should try to discover the why and wherefore of each process, and also acquire all knowledge related and relevant to it. Here what is important is that the knowledge gained by the learner must be meaningful to him, that is, it must answer the needs felt by him in the course of executing a given piece of craft work. The quantum of knowledge, as such is, therefore, not so important as its functionality. This is in contradiction to the general practice of stuffing the mind of the student with a large body of unrelated information which he will probably never use in life after he completes his formal education, and the most part of which he will forget shortly after leaving the school.

Another thing which Gandhiji greatly emphasized was that education must be closely related to society—society not in abstraction but a particular society, a community of living people among whom the child moves about and has his being. The school should seek to accelerate the process of socialization which begins in the family and goes on in the proximate community. The craft and other social and cultural activities organized in the school could serve this purpose as well. Virtues like cooperation, mutual understanding, service, freedom and discipline need to be cultivated through such programmes. The school should be a real community institution. Not only are the school and the community to maintain close contacts between themselves, but they should strive to strengthen and improve each other. The community ought to make the necessary resources—both human and material—available to the school for its efficient functioning. The school, in turn, should take initiative and extend its cooperation in all the welfare programmes of the community, such as, health and cleanliness campaigns, literacy drives, agricultural operations like manuring, sowing, harvesting, etc. Thus their mutual help and support would constantly effect improvement in the art of living.

This is, in short, what Gandhiji meant by Basic education. But a host of questions may be asked: Is it a realistic proposition or a mere utopian formulation? Is decentralization of economic and political power desirable, even if it would be brought about by some miracle? Is industrialization in itself an evil and the machine a devil,

and so on. It is not possible to answer these and such other questions once for all. But one thing seems to be clear that progress of science and technology and their use in large-scale production are irrevocable. The fruits of man's genius—discoveries and inventions—cannot be thrown over-board, just because they have been frequently misused. For, this may look like throwing the baby with the bath-water. In our desperation, we need not attempt to put the wheel of history in the reverse gear. In the first place, such an attempt is bound to be infructuous, and secondly, this would be unwise.

It should not be beyond man's ingenuity to devise ways and means to keep the forces unleashed by the development of science and industry under his control. What is needed is the organized social action. People can certainly free themselves from the strangle-hold of powers that use science and technology for their selfish ends and against the interest of the common man. People can achieve this, by means of concerted action and come into their own. Then, the large-scale industrialisation need not be a source of alienation for the working people. For all could work together and enjoy the fruits of their labour collectively. In such a social system, the machine instead of being master of man would become his faithful friend; instead of damping his spirit it would stimulate his creativity; instead of inciting his greed it would guide him towards his social responsibility. Then education need not shun the use of machine and modern techniques while preparing students for life and stick to the simpler village crafts.

The validity of the underlying assumptions of the Gandhian world-view may be called into question and the future may not be on the side of his scheme of things. But his basic principle of education, is, by and large, incontrovertible today. Now the enlightened public opinion is in favour of looking upon education as an instrument of social change. Education as an organized undertaking has to fulfil the needs of the emerging society. An inescapable corollary of this principle is that the productive work must be placed at the very centre of the educative process.

Promotion of Gandhian Values in Indian Education

DR. M. T. RAMJI*

DURING THE Gandhi Centenary Year (2 October 1968—2 October, 1969/February, 1970) the significance and relevance of the Gandhian values to our modern times was emphasized by several eminent thinkers, educationists and public men belonging to different walks of life throughout the world in various seminars, symposia and meetings organised for the purpose. For example, the Gandhi Centenary International Seminar on the 'Relevance of Gandhi to Our Time' held in New Delhi from 30th January to 5 February, 1970 issued a statement in which the following significant observations were made :

"Whatever be the precise shape of the social order or the political and economic set-up of the future, the human values which he (Gandhi) stressed will always remain at the core of the good life—tolerance, compassion, love, justice and co-operation. These are not new values; they have been basic to the thought of most great religious and secular thinkers. What was new in Gandhi were some of the methods and techniques which he experimentally developed to make these values operative in contemporary life, in spite of the very unfavourable conditions that prevailed. It is particularly to these methods and techniques that people interested in Gandhian thought should turn their attention. Gandhi has given us the idea of Basic education which seeks to utilise the educative value of productive work, carried out in a cooperative social context, not merely as a better and psychologically more suitable method of education but as a means of ultimately developing a non-violent society based on respect for work and workers. That is why he described education as "the spearhead of a silent social revolution". It may be also mentioned that the National Seminar on Gandhian Values in Indian Education convened by Union Ministry of Education and Youth Services at Sevagram during

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February 9 to 11, 1970 came to some of the following major conclusions:

"During the last three decades, the significance and relevance of Gandhian values to a reform of Indian education has come to be recognized, but these values have not yet been reflected in actual practice in millions of classrooms in the country."

1. The ultimate objective which Gandhi had in view was the evolution of a non-exploitative, non-violent society conducive to the welfare of all. To this end, it is essential to emphasize three fundamental values in education, namely :

- (a) the dignity of manual labour through the use of work as part of the educational programme ;
- (b) a sense of social awareness and social responsibility through the involvement of students and teachers in meaningful programmes of community service ; and
- (c) the promotion of a secular outlook or *Sarwadharma Samabhava*, through an understanding of the fundamental unity of all religions.

2. Suitable programmes should be developed to realize these values which should cover all stages of education and be varied and flexible to suit local conditions and available skill and resources.

During the last decade, the significance, soundness and relevance of the Gandhian values to a reform of primary education in India has come to be recognized by several educationists as well as by the Education Commission (1964-66). It may be said that the Gandhian values have been reflected to some extent in some primary schools in the different states in their various curricular and co-curricular programmes, but these values have not been reflected effectively in actual practice in many of primary schools in the different states in our country. By and large, many primary schools throughout the country lay one-sided emphasis on literacy and do not cater to the total development of the personality of the educand.

The recent doctoral study of the Concept of Personality in the Educational Thought of Mahatama Gandhi by the present author has shown that in the Gandhian thought there is an intimate relationship between education and the development of personality since Gandhiji considers the main aim of education as the healthy all-round development of the body, mind and the self (the spark of life-force) dimensions of the personality of the educand in order to produce harmoniously developed whole personalities. The identified qualities of a harmoniously developed whole personality (Ideal personality) in the Gandhian thought are .

- (1) Fearlessness, (2) Truth, (3) Non-violence (universal love),
- (4) Self-less Social Service, (5) Total Self-control (purity),
- (6) Non-possession (7) Detachment, (8) Capacity to do Intelli-

gent productive manual work (bread labour), (9) Humility, (10) Simplicity, (11) Co-operation (12) Cleanliness (13) Calmness, (14) Cheerfulness (15) Respect for religions, (16) Palate control

A few empirical studies have shown that the pupils who studied in the primary schools based on the Gandhian values were superior to the traditional primary school pupils in traits such as forwardness, self-confidence, emotional maturity, serious-mindedness and truthfulness, honesty, originality, co-operation, leadership, reliability and local knowledge. Observational studies of the behaviours of primary school pupils involved in curricular and co-curricular programmes based on the Gandhian values have shown that such programmes provided situations for the development of the following ten personality traits : (i) cleanliness, (ii) punctuality, (iii) regularity, (iv) co-operation, (v) leadership, (vi) honesty, (vii) helpfulness, (viii) curiosity, (ix) obedience, (x) self-confidence

In the light of the above analysis, it may be stated that according to the Gandhian frame of thought the central aim of education is the healthy, harmonious development of the personality of the educand in order to produce healthy, balanced and integrated personalities who strive to promote the evolution of a non-exploitative, non-violent, juster social order, conducive to the welfare of all .

To the above end, it may be stated that it is highly desirable to pay special attention to the promotion of the following Gandhian values in Indian primary education, namely :

- (a) *Physical and mental health* specially through healthy, hygienic living and participation in group activities and the creation of democratic classroom climate ;
- (b) *The dignity of manual labour* specially through the use of productive, socially useful manual work as part of the educational programme ;
- (c) *A sense of social awareness and social responsibility* through the involvement of pupils and teachers in meaningful programmes of community service ,
- (d) *Scientific attitude* specially through critical observation of one's environment and effective teaching of science ;
- (e) *Secular outlook or Sarvadharmā Samābhava* specially through an understanding of the fundamental unity of all religions ;
- (f) *Fearlessness, Truth, Non-violence, Purity and Service* by promoting the formation of personality traits such as self-confidence, honesty, helpfulness, self-restraint, co-operation and leadership through regular participation in curricular and co-curricular activities and the example of the teacher.

Suitable programmes should be developed to realize the above

values especially at the primary stage and these should be varied and flexible to suit local conditions and available resources. They may, for instance, include :

- (a) classroom teaching in the set-up of democratic climate ;
- (b) curricular activities like chorus reading, recitation ;
- (c) community prayer ;
- (d) cleanliness programme ,
- (e) programmes of community service ;
- (f) manual work like gardening, wood work, spinning, weaving and metal work;
- (g) co-curricular activities like games and sports, bhasabha, (students assembly), celebrations of festivals and birthdays of great personalities and also excursions ;
- (h) loud and silent reading of stories and brief biographies of different religious personalities ;
- (i) creative and artistic work like claymodelling, paper and cardboard work, drawing, singing, and painting.

Above, all the example of the teacher is a very important factor in the promotion of the Gandhian values in primary schools To quote Gandhiji :

"To me religion means Truth and ahimsa or rather Truth alone because Truth includes ahimsa, ahimsa being the necessary and indispensable means for its discovery. Therefore, anything that promotes the practice of these virtues is a means for imparting religious education and the best way to do this, in my opinion, is for the teachers rigorously to practise these virtues in their own person. Their very association with the boys whether on the playground or in the classroom will give the pupils fine training in the fundamental virtues."

Gandhian Values in Education

DR. G. N. KAUL*

INDIA IS one of the few countries of the world which can boast of an unruffled continuity from times immemorial. It faced various situations and challenges at different periods of life beginning with the coming of the Aryans to the exit of the British. The challenge of the Aryans to the pre-Aryans or that of Muslims to Hindus or that of the Englishmen to both Hindus and Muslims produced an awareness which recognised the complexity of the situation and led to a kind of response which did not lead to a break with the past and instead reinforced this continuity. These challenges were comparatively simple and were confined to political or religious events. But the challenge now is of a different pattern. It is the challenge of reacting to a philosophy which undermines the human spirit and over-rates his intellect.

This challenge comes mainly from the West and its science. The scientific revolution, as we know, originated in Western Europe. How and why it originated and developed as it did in the West is interesting but cannot be discussed here. Suffice it to say, it had much to do with the philosophy which the West was developing prior to this revolution. The challenge consequently comes both from this philosophy and the kind of science that it has and continues to develop.

Science, as such, has much to its credit. It has succeeded in limiting disease and minimising human pain and suffering. It has built up human morale. Man now ventures to challenge dogma, superstition and authority. He can think and feel freely and this has helped him to pull down the walls of prison and slavery. It has reduced his manual drudgery and given him leisure. We are now looking forward to new developments in cybernetics-computation and automation—to relieve him of mental drudgery. Today an average man has more leisure than he ever had. He also has far more material comforts than he ever had. In fact some countries of the West have become really affluent. Most people there have all that man could aspire for. In fact many a com-

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mon man there enjoys more amenities than kings and princes did in recent years.

But what is the other side of the picture. Western science and its handmaid, the industry, developed without a social conscience. It has and continues to invent the most destructive instruments of war. Historically it induced the West to go abroad and enslave the less developed peoples and create colonial empires. It induced them to develop a new morality under which they exploited men/women and children of the weaker sections of the humanity, so that they could feed their own better. Half of the human world was thus condemned to a life of hard toil, poverty, disease, slavery and helplessness for generation. It induced the Governments also to develop a brand of morality which created and justified inequality amongst nations. It authorised persecution and repression of those who asked for freedom or equality. It exterminated some cultures and impoverished many more. It led them to get hold of the land of others and render the natives as foreigners in their motherland. It led to apartheid where man still cannot claim equality with man. It has given to the West and now to the East the philosophy to work for material affluence, multiply needs, work for the satisfaction of these and creation of more. For this purpose it has all along exploited not only the time and life of weaker sections of humanity but also the tongueless Nature. It has been a proud slogan of the West to "conquer nature". And in this proud conquest it has destroyed much that is lovable, beautiful and in many ways essential for man's survival itself. We have already succeeded in polluting water, air and space "There is dreadful contamination and poisoning of rivers, oceans shores by cities sewerage and water from tanneries and chemical plants. There is shocking contamination of the air by smoke from factories, fall out from explosion of atomic bomb and in large industrial cities the discharged vapours from motor vehicles"¹

There is rise in crime and juvenile delinquency. There is revolt against established traditions and value system. Man has become a mere biological entity—he is no longer a wife, a husband, a brother or sister and so on. The society in many parts of the world is becoming permissive—a society whose ideal is a return to nature in the image perhaps of the commune or commonwealth of street dogs. This society undoubtedly lives as near to nature as possible. In this it has no hypocrisy whatever. Its members can stage the sexual act with any other, anywhere. Trade and business have developed scientific methods to create needs and exploit the pocket of man than serve his need. The pharmacologist so organises his market that he sells the most needed life saving drug at the highest price. The most competent physician

1. The Emerging World, Chapter by Richard B. Gregg, p. 76

is available not to those who need him most, but to those who can pay. It may be that the physician does wish to serve him also who needs him most but we have created the condition that he just cannot. He is governed by his needs, not by the values of his profession. The politician professes noble ideals but as soon as it suits him he can change his colour. His behaviour is typified by the slogan "Aya Ram, Gaya Ram" and so about other professions and vocations.

A crime which the Western science could be accused of is that man, and particularly the weaker man, has to live in perpetual fear. Those who know science more are more powerful to destroy man. Nations of world are in perpetual guard against one another and each one in its own way, is trying to outdo the other.

There indeed is a kind of peace today in the world. But is this peace born of human wisdom and love for man and nature? No, it is not peace. It is the grim silence of humanity brought about by the dreadful fear of getting annihilated in the event of war or miscalculation about war.

There is yet another crime which the West committed. In its enthusiasm to "educate" the non-west, it undermined its genius and imposed its own philosophy and system of education wherever it established its empire. Its heavy hand was heavier than the leveler. The result is that today it is the educational system of the West, its value pattern and system of thought that are dominating the entire world. The rich variety that you could otherwise find has disappeared. It has been razed down to dull uniformity. The native modes of thought, however, strange, grotesque, even 'uncivilized' could yet be unique. One of the worst criticisms of democracy as practised by the West during the last two centuries is that to the non-West it has been totalitarian at its best. It has destroyed variety and valued uniformity.

Such is panorama of world situation and its forces that India is facing. During the British time the response to it was varegated. Some admired the British ways of life and started living it. They looked down upon all that was Indian, its dress, modes of thought, religion, religious books, art, literature, culture, etc. There were others, both Indians and foreigners including the British, the French and the Germans who looked into the arts and literature of India and found it comparable with any in the world. Their efforts prepared the way and ultimately led to Indian Renaissance. More and more scholars began to study and interpret Indian literature and produced an array of distinguished Indians in all walks of life. This period was one of the most creative in India in the recent centuries. It restored confidence to the depressed and much abused spirit of India and gave it a new appreciation of the world and of its own culture and literature and

whispered into its ears the role that it could play in enriching human life. The immediate fruit of this reaction was the political movement in the country and the emergence of Nehru-Gandhi Era. The Indian response to the West was typified by these two great Indians. The essential India asserted itself through Gandhi. His concept of human development, science, industry, technology, economics, administration, individual rights and obligations—all were based on mostly his understanding of the Indian way of life. He was not opposed to science or material. But he was certainly concerned about human freedom. He did not want man to become the slave of another man or the machine. He was in the truest tradition of Indian culture, opposed to equating man, his intellect. To him the spirit of man was greater than this intellect and he called this spirit his "inner-voice". To rationalists it may be a dangerous dogma, but it is there. However, this assertion cannot be read in isolation. It has to be read and understood in the context of the Indian concept of the "good man".

He had a wonderful grasp of the Indian situation, its poverty, its much abused spirit, its hurt pride, its filth and dirt and squalor, its superstition, its communal problem and many other ills of its social, economic and political life. He was also aware of the technological scientific and economic philosophies of the west. But he drew solutions to Indian problems from the Indian situations and the Indian thought. Some of the concepts that he drew on were : the concept of man, the universal; the concept of self-sacrifice, Ahimsa and love for man and nature. Nehru's approach was different. He was a great intellectual and had a clear grasp of the growth of science and technology and the good it could do to humanity including India. He was, therefore, anxious and in a hurry to rebuild India. His idealism arose from his Indian decent but his approach was determined by the rationalism of the west. When the two, Gandhi and Nehru, functioned together, it was an ideal team for India. The spirit of India and the rationalism of the West fused in the work of the two and provided a sound basis for Indian thought. Unfortunately Gandhi was murdered and there was none to replace him. Nehru was left alone and the Indian thought again became unbalanced. Gandhi wanted to develop man. Bereft of his influence, Nehru began to make him comfortable. In truth Gandhi and Nehru held diametrically opposite views on many fundamental issues and yet they were so close to each other. Nehru almost worshiped Gandhi and called him a magician who could transform a sleeping nation into a nation on the march. Gandhi loved Nehru and made him his heir. But never did a disciple so quickly and so effectively damage the ideology of his master than Nehru did

Now to all intents and purposes we are rebuilding the West on the soil of India. We certainly have not done much in this direction but we are on the way to it. We have begun to taste the fruit of the little we have done during this short period of two decades. We are in no doubt as to what has happened to the quality of Indian and this must warn us against the danger that lies ahead. Today, what is it that we value most? Is it sense of sacrifice? Is it love for the fellow? Is it respect for one's duty? Is it concern for human dignity? Is it concern for values? We need not hide the answers to these questions from ourselves. What we care for today is not these values, but power, material success and selfishness. Centuries ago when Plato said "What is honoured in a country will be cultivated then" and so we are out to cultivate selfishness, material gain and power by any means. If we want to change and if we do not want to repeat the experience of the West we have to honour a different set of values. Years ago some American thinkers felt "If the American people honour wisdom and goodness as they now honour power and success the system of universal free education would be quite different from what it is today."¹ I am not aware how far Americans have been able to shift from 'power' and 'success' to "wisdom and goodness" and I am not aware how far India finds the need.

Gandhi developed a vision of India of his dreams. To achieve it one of the steps that he took with great enthusiasm and faith was to conceive the system of Basic education. The system consequently is not a bundle of techniques put forth by a pedagogue but the functional aspect of a philosophy. This philosophy arose, as we have tried to see, in response to India's urge to re-assert itself. Some of us accepted the system as firm believers in a new vision of India and some as a convenient expedient suitable at the moment. Soon after the achievement of Independence and the murder of Gandhi, Nehru dominated the scene and he had his own vision of India. Gandhi stood for the supremacy of human spirit; at lower level he stood for cottage and small scale industry, for decentralised economy and the principle of trusteeship in wealth. Nehru stood for the supremacy of the intellect and science and at a lower level for heavy industry, comparatively centralised economy and rejected the principle of trusteeship as archaic. Here was an obvious ideological conflict. The system of Gandhi could not succeed. It became a 'fraud'. This failure held the mirror to the Indian minds of the day.

Where do we stand today? Do we need science and industry? Are we in a world which is all out for it, do without it, Is science or industry an evil? No, science after all is the pursuit of truth and this is

¹ *The Conflict in Education*, Robert M. Hutchins, p. 8.

in the highest tradition of man's spirit. What ails science today is not the spirit of science but the philosophy which utilizes it. Today we use it for the pursuit of affluence and power. Today it belongs to politics and economics. This is not the science we need. We need science which will help us in the pursuit of higher values. We want science to help us, know and cultivate the 'good' and not simply provide us with the "pleasant". This in fact is the essence of the Gandhian philosophy of life and education.

Obviously it has a potential for the growth and development of man and a potential for offering an alternative to the present Western philosophy. The search for an alternative philosophy is not limited to the East alone. The West also is in search of it. Many, therefore, in India and abroad are drawn to this philosophy. Recently we have begun talking about Gandhian values in education. What however we mean by Gandhian values is something very limited. We usually spell them as cooperation, *safai*, community work and so on. These activities are true of any system of education. There is nothing particularly Gandhian about them. But Gandhi did emphasize these. Basically, however, Gandhi stood for a particular philosophy of life and education. We believe Gandhi by talking about his values in education and not his system of education. We do not want it because it does not suit us today. Yet, it is good to talk about them and try to implement them in the classroom because even this shadow might some day point to its substance.

This is the International Education Year. It is being celebrated throughout the world—an august year, indeed, for all mankind. During this year countries all over will be devoting thought to many aspects of education; how to make it universal—how best to make it productive; and effective and so on. We in India are also giving thought to its various aspects. We are holding seminars, conferences on technical education, primary and work-oriented education, and, adult education, and so on. All this is good but the more important and relevant question that the world may ask itself is : education for what? What is the direction, towards which the world community is going? And what are the ways in which each country can be enabled to identify its individuality and give expression to its true personality. The wisdom of the world certainly does not lie in any one region of the world. And the wealth of the world is not its land, philosophy or science but its human variety and its potential. And this variety needs to come to its own.

India has during the fifties and the sixties adopted a way of life which to some, is not the way she should have adopted. "Since India attained her political independence", says Arnold Toynbee, the eminent historian, "India has been on trial. While she was still struggling

to win her independence she embraced Mahatma Gandhi's ideals and under his leadership she achieved her independence in the new Gandhian way. But the attainment of independence has brought with it greater moral ordeal than the previous struggle for it". Discussing some of her political problems the historian asks "Could she not make a new start—a Gandhian start". It would extend the question to her problems of education and repeat "Could she not make a new start—a Gandhian start". The historian continues "This is a hard thing to ask of any nation, it is to ask a nation to rise above itself". I join the historian when he says "Yet this can be asked of India for in rising above herself, India could be rising to the spiritual level that Gandhi has set for her"¹

Last year we held the Gandhi Centenary year. Much time and thought was devoted by some of the best thinkers and educationists to examine the relevance of Gandhian thought to modern times. Should the discussion and the time devoted to it and the thinking thus generated, not be utilised for the development of Indian thought at least, if not the thought of "modern times". Should India not seize the golden opportunity offered by the International Education Year, and make known to world the essence of this educational philosophy. The world, as shown above, does stand in need of an alternative philosophy and would be grateful to India if it took the initiative to explain it, the way it should. And here is a philosophy which does offer an alternative to the existing ineffectual materialistic philosophy which has and continues to undermine the spirit of man and what is more, it has the potential to protect the man from the tyranny of man and enable him to live to the height of his own spirit.

The decade of seventies, therefore, is crucial for India. This decade will determine what are the values dear to India and consequently what is the type of education she in reality desires or deserves.

1. *The Emerging World*, Chapter by Arnold Toynbee, p. 244.

Role of Gandhian Values in Primary Education

B. D. SRIVASTAVA*

THE WHOLE educational system in India has developed into a vested interest of administrators, managers, teachers and politicians. This vested interest wants to maintain the status-quo in society and prevents education from becoming an instrument of social change. The educational system in India would change only when there is a desire for change in the social structure. And if this change is to be effected through non-violent means the Gandhian values must be introduced into our educational system.

At the National Seminar organised in February, 1970 at Sevagram on Gandhian values in Indian Education, Professor V.K.R.V Rao, the Union Minister for Education and Youth Services confessed that, "the present educational situation in India presents more or less the same spectacle as it obtained in 1937, when Gandhiji came out in a concrete form, with his ideas of 'educational reconstruction' During those 33 years, inspite of 23 years of independence and about 19 years of planned development, the quality of education in terms of self reliance, social awareness and national integration does not seem to have grown to any appreciable extent even though there has certainly been vast quantitative progress in terms of number of pupils and number and variety of educational institutions. . . . Education continues to be equated with literacy and learning and there is hardly any room for practical and productive work. There is little life giving contact between the school and the society or between the curriculum and the vital activities which sustain life outside the school. It draws visible distinction between work and study work for servants and study for students. Automatically, therefore, there develops a dichotomy between the attitude the student acquires and the world of reality in which he enters after leaving his school or college."

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Gandhiji wanted to bring into existence a non-exploitative, non-violent society in which every body would get equal opportunity for self development and self determination. This is still our objective. But such a society must be founded on values of dignity of labour and non-possession which are opposed to the idea of centralisation of power and property. This is why Gandhiji advocated decentralization of Indian economy and village self-sufficiency and laid emphasis on village industries and pleaded that every body must do some socially useful work with his own hand.

These are some of the values which Gandhiji also wanted to be introduced into the educational system as well as this is why he founded Basic Education. If, therefore, we want to bring into existence a non-exploitative, non-violent society we must introduce into our educational system the values we have failed to introduce so far.

In the National Seminar at Sovagram these were spelt out as follows:

- (a) the dignity of manual labour through the use of work as part of the educational programme
- (b) the sense of social awareness and social responsibility through the investment of students and teachers in meaningful programme of community service, and
- (c) the promotion of a secular outlook, or *sarvadharmā samānaya*, through an understanding of the fundamental unity of all religions.

The Seminar has recommended that suitable programmes should be developed to realise these values which should cover all stages of education and be varied and flexible to suit local conditions and available skills and resources. They may, for instance, include :

- (a) safety and maintenance of campus,
- (b) participation in sowing and harvesting operations, through suitable adjustment of vacations;
- (c) participation in productive work in agricultural operations in the school, family farms or the neighbourhood;
- (d) teaching of crafts;
- (e) cultivation of hobbies ;
- (f) adoption of new methods of teaching which provide opportunities for work with hand to the maximum extent possible in every subject ;
- (g) establishing close contacts between the educational institutions and community through programmes of mutual service and support ;
- (h) participation in programmes of relief in times of famine, flood, epidemics and other natural calamities ,
- (i) beginning the school day by an assembly with silent and/or

common prayer and provision for teaching of moral and social values ;

- (j) organising suitable programmes of adult education, including the spread of literacy ; and
- (k) involvement of students in programmes which will train them in responsibility.

A minimum programme of action on the above lines should be drawn up and introduced in all institutions, involving students in its planning and implementation. In addition, encouragement, recognition and some special assistance should be available to institutions which develop the programme in depth and with a sense of dedication. It is desirable to launch pilot projects in selected districts (at least one in each State) where the programmes could be developed intensively.

The programme should be introduced both in urban and rural areas. In view of the special problems involved, the Ministry of Education and Youth Services may set up a Study Group to make concrete proposals for their introduction in urban areas.

3. These programmes have an obvious significance at the primary stage on which about 70 million children are involved, most of whom are not likely to proceed beyond that stage.

These programmes need not be confined only to the school campus. Rather, they should extend to the community as a whole.

4. At the secondary stage, the programmes of work-experience should be highlighted. Every effort should be made to link them with the developmental efforts going on in the neighbourhood, so that the students get a sense of meaningful participation in nation building activities.

5. At the university stage, the national service programme should be generalised. Besides, pilot projects to attach workshops or farms to selected institutions should be introduced.

6. It is essential to produce books for children to teach Sarvadharm Samanvaya. Vinobaji was requested to guide the preparation of such books and he has agreed. These should be translated and published in all the languages.

7. All students should be introduced to the life and message of Mahatma Gandhi through suitable courses. In addition, there should be appropriate facilities, at the university stage, for those who desire to study his message in depth.

8. The success of these programmes will largely depend upon the efficiency and proper orientation of teacher training institutions, the quality of leadership provided by the state education departments, and the extent to which the programme becomes a movement undertaken by the community of teachers themselves. They should therefore, receive adequate attention on a priority basis.

9. The realisation of Gandhian values in education needs an elastic and dynamic system of education for its proper development. Simultaneous attempts should, therefore, be made to reduce the rigidities of the present system and to permit greater elasticity in curricula and examinations.

10. The efforts of the educational system to realise these values will need support from parents and the community in general. An appropriate Loka Shikshana (Social education) programme to this end should, therefore, be simultaneously developed.

The purpose of this paper is to bring to the notice of this Seminar the musings and recommendations of the National Seminar on Gandhian Values in Education and to plead for their immediate implementation.

Towards an Indian Philosophy of Primary Education

DR. R. P. SINGH*

Relevance of a Philosophy

SELDOM if ever, has any philosophy relevance apart from the social milieu in which it is propounded. In other words, there cannot be a philosophy of life (or its part) independent of the time, place and the purpose for which it was given birth. There should be some factors common before a philosophy is found equally meaningful for two or more different types of peoples. For instance, the existentialist philosophy or some of its various ramifications could be found equally applicable to India, as abroad, since the conditions governing its birth were not much different in pre-war Europe and the modern India. This, however, does not presuppose its universal acceptance in either place as human beings rarely concur on intellectual matters. In fact, philosophies may even be still-born in societies where no one is prepared to accept them, other than their originators. Therefore, a relevant philosophy is :

- (a) Meaningful to a group of individuals whose state of mind, about the objects of life they wish to achieve, it reflects,
- (b) And also, it has the potential to be achieved in life.

The Indian Context

Applied to primary education the above discussion should lead us to state that India's primary education must have a philosophy distinct from those where conditions of life are different from us. For instance, neatness in habits has a distinct connotation in England which is not true of India. Therefore, at the conceptual plane each teachable concept has to be redefined in the Indian context. And this is what I mean by an Indian philosophy of primary education. Each concept, decided on a priority basis, has to be made logically clear to the child.

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Another important consideration while talking about the philosophy of Indian primary education should be the social milieu in which this education has to be offered. Considering the texture of our society this philosophy must clearly reflect the rural and urban differences and the extent to which both these could be lumped together. The tremendously important problems of Indian life are social and regional integration, commitment to the Indian way of life, economic development of the country etc. And they must be clearly reflected in this stage of education and its goals. It may also be mentioned here that in India even primary education is a luxury for the majority, for the bare means of subsistence are non-existent for the most. That is, this education besides being a constitutional obligation should be made to appear intrinsically valuable also, because in other developed economies this goal is unnecessary now. It further means that the goals of primary education that we may fix now will not hold good for all times to come, i.e., their relevance is to a large extent governed by the relative contextual framework they are placed in. It is interesting to note what the Education Commission says about the targets of Primary Education because as I view it they have attached a distinct Indianness to this problem.

"We shall now proceed to discuss another highly significant programme of educational reconstruction, namely, the fulfilment of the directive principle contained in Article 45 of the Constitution, that the State should strive to provide free and compulsory education for all children up to the age of 14 years. This was to have been achieved by 1960. But in view of the immense difficulties involved such as lack of adequate resources, tremendous increase in population, resistance to the education of girls, large numbers of children of the backward classes, general poverty of the people and the illiteracy and apathy of parents, it was not possible to make adequate progress in primary education and the Constitutional Directive has remained unfulfilled."

Does Primary Education have a Distinct Philosophy

To the question whether primary education has a definite philosophy in contradistinction to the secondary, or higher education the answer would appear to be in the negative. There is a possibility that on certain points one may qualify one's statement but surely in a general, broader sense there can be goals of education and a philosophy of education out of which the primary education may partake of some. But to say that it is different for all stages would not be very logical. One may as well remember that educational goals not unlike life goals and its philosophy are not different for different stages, say

youth, old age etc. For an individual life is a continuous whole and for each stage he may fix up some goals to mature and attain but he cannot say that his philosophy of life for his childhood is different from his philosophy of youth. At the most he could say, and, that too logically, that the childhood needs are different and they may be fulfilled at that age and that when he is young he would have a separate set of requirements and ambitions to fulfil. But life as such has to have a pattern, a continuity both in thought and living. The same individual has to mature from one stage to another but the destination for him cannot be identified with each station that he reaches on his way. This, however, does not deny one the right to fully live the age which he has attained but that age or stage of life has a history behind it and a future to look for and in their own ways both condition the intermediate position.

A child who comes to school at the age of 5 has biologically developed in physical and intellectual strength. He has acquired a vocabulary suited to his economic status in society and also has a vague idea why he has come to school. But the major decisions for him, say, about the choice of school, the type of course, the medium of instruction, the equipment etc., have all been taken for him. That means although a child does have a discretion, he is not allowed to use it. The freedom of choice is unknown. He cannot use his discretion even in such minor matters as the choice of dress, shoes, socks, tie, and even tiffin. The weight of society lies too heavy on his shoulders for him to freely operate. He does not choose a social setting, he just inherits it and lives it.

Against this background it is irrelevant to talk of individual choice and freedom versus social constraints. It is the latter whose existence is fairly obvious. Obviously then the Indian primary education cannot logically and does not in fact resemble any other elsewhere except in name and some physical facilities. Whereas in India even primary education is a stage of education independent of others and its universal provision is a distinct goal, elsewhere it is not so.

Is Primary Education Useful?

In as much as primary education makes a child literate and prepares him temperamentally for an academic growth it cannot be said to be useful. But this 'utility' by itself is a relative term. It hides within itself a direction, a frame of reference and also a limitation. Granting such favourable circumstances as child's preparedness, the frame of reference, i.e., urban or rural background, parental aspirations, the social constraints, like sex differences would impose upon him their own peculiar demands. Then, the limitations of the stage

would also operate freely upon the child, i.e., how much could one teach at this stage and how much can a child learn would be real inherent limitations of the stage. One could not possibly go beyond these optimum stages of teaching and learning.

Today's crucial debate concerns more, what constitutes usefulness in our context today rather than whether or not primary education is useful, for on that will depend the approach, the extent and goals of life. It has been generally agreed, that knowledge particularly its 'rucksack' variety, is not going to be useful in India. We have only few years to teach and the child has not matured enough to discriminate and use out of the assortment he has collected in the name of knowledge. If one distinguished between the lower and senior primary then in the junior primary the most useful teaching would pertain to .

- (a) personal and social neatness, health, sanitation ,
- (b) good manners ;
- (c) respect for elders ,
- (d) learning of alphabets, numerals etc ,
- (e) games, recreation.

In the senior primary the teaching of regular subjects will begin without undermining that has been taught earlier and on sub-criteria like .

- (a) logical priority ,
- (b) utility for some other part of curriculum such as skills etc
- (c) economic value of the subject, and
- (d) interest of the children.

The choice of subjects children will have would be conditioned by the above sub-criteria. The subjects the child learns at the senior primary education stage, specially when it is the last stage of education for the majority of children, should be of vital interest to him and to the society. About the imparting of economic skills one point may be mentioned in passing. In the senior primary a child cannot be given, because of his physical incapacities and limitations of time, a pre-vocational training. It may not even be desirable for all areas. A linguistically gifted child, for instance, cannot be made into a writer, a scribe etc., at that age. But one thing is generally agreed that as children enjoy doing physical work and manipulating things with hands they could easily be taught some elementary science and given 'work' experience. This 'work' experience has to be distinguished from the experience, children have on the job in a factory or workshop. It is 'work' all right but it does not have the seriousness of the pre-vocational training.

Towards an Indian Philosophy of Primary Education

Against the background of the above discussion one thing must be fairly clear. We cannot have a philosophy of primary education that is not basically Indian in texture and spirit. It is a moot point how much of that has to pertain to the common element anywhere in the world, the child. But the fact that its warp and woof and frame of reference have to be entirely Indian, there can hardly be two opinions about it. Like the Education Commission, we must also be talking of the India of tomorrow that is yet to be. We certainly cannot think of a static social order. Consequently, the Indian philosophy of primary education must keep on changing along with the goals of Indian life.

Elementary Education—The Story of its Growth in The Modern Period

DR. B.S. GOEL*

As is well known the British had come to India for trade and not for educating its people and that education was a by-product of their political rule. Their earlier attempts in this connection—Calcutta Madrassah (1781) and Sanskrit College (1881) or even the educational clause of the Charter Act of 1811, lacked clarity of purpose and did not in any way relate to the promotion of primary education in India. Some efforts in this regard were, however, made by the missionaries—Tanjor schools founded by Swarts, Marshman's schools for the people, and May's Chinsura schools were some of the examples.

Two societies—the Calcutta School Book Society and the Calcutta School Society were founded in 1817 and 1919 respectively. Their aim was "the diffusion of useful elementary knowledge and the establishment of native schools throughout the country". Both these societies received some grants from the Government. This was, as Howell, feels, "the first recognition of the part of the Home Government of the claims of Education of the masses?" The attempts made by these societies though commendable were very meagre.

From 1820 to 1853, a number of controversies raged on the Indian educational scene. A number of surveys were also held regarding the existence of facilities for primary education in the various parts of the country. Practical attempts on the part of the Government to provide such facilities were, however, largely missing. As the Adam's Reports tell, the Indians got most of the primary education through the indigenous primary schools. "Those schools" (were) to cite Adam himself, "originated and supported by the Natives themselves". They numbered about 100000 in Bengal and Bihar alone. Obviously, said Adam "the system of village schools is extensively prevalent" which showed people's desire to educate their male children.

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1854-1904

The real attempts began to be made only after the Wood's Despatch of 1854, which specifically wanted the Government to create a "properly articulated system of education from the primary school to the university". The Despatch gave due recognition to the indigenous primary schools and proposed their encouragement through suitable grants-in-aid.

Numerous new socio-economic factors had emerged by then e.g., the Western ideas through English education were responsible for a great deal of "scepticism, agnosticism and free thought". Alongside new industry, new jobs and commercial openings and new politico-administrative needs were providing a great fillip to social mobility. Those factors posed a challenge to the existing feudal, religious, caste and other barriers, and also helped in the formation of new motives, new ideas and new attitudes among the people. These and contemporary British enlightened thinking were responsible for the issue of circular No. 60, dated 11-2-1871 by the Indian Government. It, *inter-alia*, stated, "It has been repeatedly declared by the Secretary of State that it is a primary duty to assign funds for the education of those who are least able to help themselves, and that the education of the masses, therefore, has the greatest claim on the state funds. The Government of India desires to maintain this view."

The importance of the circular lies in the fact that while it reaffirmed the interest of the Centre in the educational development on the one hand, it also made the Central Government to assume some responsibility to educate the weaker sections of the community on the other. In fact, the later attempts to give special attention to the education of Scheduled Castes and tribes should be seen against this background.

During those days, the slogan for mass education was also raised by the educated section of the community. Mr. Justice M.G. Ranade who conducted the columns of an anglo-vernacular weekly "*Indu-Prakash*" (Bombay), and Mr. James Maclean who was the editor of *The Bombay Gazette* (Bombay), started demanding free and compulsory education for the people in general and the *ryot* in particular. All this preceded the circular of 1871. The circular further intensified the demand.

That the Government was conscious of these demands, and the need for providing more facilities for primary education was well reflected in the Education Commission of 1882, which is popularly known as "Hunter Commission". It made as many as thirty-six recommendations in regard to primary education. The seriousness of the recom-

recommendations of the Commission can be easily seen by the fact that various provincial governments tried to implement some of them. Then came in 1893, Dadabhai Naoroji who raised his powerful voice for free and compulsory education as a remedy for Indian illiteracy.

The result of all these efforts was considerable. On the positive side the number of schools and enrolment went up considerably, e.g., in 1881-82, the number of schools was 82,916 with a total enrolment of 20,61,541 and in 1901-02 they were 97,854 and 35,64,122 (including pupils on rolls in primary department of secondary schools) respectively. Still the growth was far from adequate in view of the magnitude of the problem. Lord Curzon said in a speech in 1901 that, " . . . (he) could not be satisfied with a state of things in which four villages out of five are without a school and three boys out of four grew up without education and one girl in forty only attended the school". Though small this quote speaks volumes about the extent and magnitude of the problem at the turn of the nineteenth century.

1904-1929

Things started rather brightly in the twentieth century. Because of Lord Curzon's ideas, a Resolution in Education Policy was issued in 1904. The resolution stated .

"On a general view of the question the Government of India cannot avoid the conclusion that primary education has hitherto received insufficient attention and an inadequate share of the public funds. They consider that it possesses a strong claim upon the sympathy both of the Supreme Government and of the Local Governments, and should be made a leading charge upon provincial revenues; and in those provinces where it is in a backward condition its encouragement should be a primary obligation".

After that many things happened in quick succession. In 1906, the late Maharaja Sayajirao Gaekwad III of Baroda introduced compulsory primary education in his state through legislation. In 1910, G.K. Gokhale moved a Resolution in the Imperial Legislative Council that, " a beginning should be made in the direction of making elementary education free and compulsory throughout the country". In the same year, that is 1910, the Indian National Congress and the Muslim League, adopted Resolutions in their general meetings asking for free and compulsory education. In 1911, G.K. Gokhale introduced his famous Bill in the Imperial Legislature demanding free and compulsory education. In 1912, Mr Montague, during his Budget speech, 30th July, 1912 (in the British Parliament), devoted some attention to the problem of mass education in India and held out

some assurances.

The result of all these efforts was another Resolution on Education Policy (1913), which was another land mark in the history of primary education in India. It said emphatically -

"The proposition that illiteracy must be broken down and that primary education, has in the present circumstances of India, a predominant claim upon the public funds, represent accepted policy no longer open to discussion....

It stated further :

"It is the desire and the hope of the Government of India to see in the not distant future some 91,000 primary public schools added to the 1,00,000 which already exist for boys and to double the 4-1/2 millions of pupils who receive instruction in them "

The character of the battle on the front of primary education after 1913 started changing fast. The Great War of 1914, the August Declaration of 1917 promising some kind of responsible government to the Indians, the Act of 1919, the Non-Cooperation Movement and the introduction of Dyarchy in 1921 were some of the major political events which influenced the growth of primary education tremendously. The slogan of "responsible government" heightened the need of an educated electorate, thus giving a fresh impetus to the idea of free and compulsory education. The association of Indian ministers with education in the provinces helped the cause further. The non-cooperative Movement spurred the educational ideas of the masses. The results were satisfying. Not only were the compulsory education Acts passed more speedily, the enrolment at the primary stage also increased tremendously everywhere.

This progress which may appear spectacular was in fact nothing in view of the actual magnitude of the problem. The Hartog Committee Report (1929) took due notice of it. Not only this. It pointed out the existence of two other phenomena—wastage and stagnation which were neutralizing the spurt in enrolment. It lamented, "out of every hundred pupils (boys and girls) who were in Class I in 1922-23, only eighteen were reaching in Class IV in 1925-26".

1929-1947

The Simon Commission recommended the abolition of Dyarchy, and advocated in its place "provincial autonomy" thus enlarging the scope of "responsible government". The passage of the Act of 1935 brought new situations to the fore for the leaders of the National Movement. In 1937, the Indian National Congress fought the elections also. It captured seven provinces initially, but gradually its

influence increased, and by the year 1938, it captured all provinces except Bengal and Bihar.

These political developments were influencing the educational-front also. First, the famous "Wardha Scheme" containing a provision for free and universal education for all the boys and girls on compulsory basis, saw its origin in the period. In 1938-39, the Central Advisory Board of Education set up two committees on Basic education. They also made some recommendations in regard to free and compulsory education up to the age of 6-14.

These developments were due to political events. But the World War II broke in 1939. For certain reasons, the Congress Ministries had to tender their resignation. The problem of primary education was also put into cold storage.

It was only in 1944, when the war was nearing its end, that the famous 'Sargent Plan' was chalked out. It also recommended a system of free and compulsory education for all children between the age of 6 and 14. Before this scheme could be put into practice India got her freedom in 1947.

Obviously therefore the growth of primary education was rather slow up to 1947. As noted earlier, in 1926-27, the number of primary schools was, 189,348 and the students in them were 91,20,458. In 1946-47, the number of primary schools was only 1,72,661 but enrolment figures reached 141,05,418 mark.

Post-Independence Period

The situation inherited from the British with regard to primary education was not happy from any standards. Even other politico-economic factors were far from satisfactory. The only redeeming features were the hopes, aspirations and enthusiasm of the people after a long stretch of slavery.

The things started brightly after independence. The article 45 of the Constitution stated "The State shall endeavour to provide, within a period of ten years from the commencement of the constitution for free and compulsory education for all children until they complete the age of fourteen year".

The enthusiasm, however, soon waned. The First Plan itself did not appear very enthusiastic about the provision of facilities for primary education as it was conditioned by the idea of "quick returns". Sensing that the government may not allocate sufficient funds for the fulfilment of the constitutional directive, the CAME in its twentieth meeting in November, 1953, felt that the Planning Commission should make adequate provision for the education of the

age-group 6 to 11. There was some public criticism also. Consequently, the Second Five-Year Plan spoke highly in favour of the need for primary education, but in regard to free and compulsory primary education, it wanted the operation to be limited to certain selected areas alone. The Third Plan again lauded the ideal of primary education, but allocated much less than what was desirable for the achievement of the ideal. This is exactly the position which the Fourth Plan assumes.

The result of this "tall talk" but insufficient allocation of resources is that we are nowhere near our objective in the matter of primary education. This is, however, not to deny the progress which is quite spectacular in comparison to the pre-independence period.

Future Prospects

The position regarding the target of 100 per cent enrolment does not appear very encouraging. The enrolment for the age-group 6-11 rose from about 35 per cent in 1946-47 to 62.4 per cent in 1960-61, and 74.9 per cent in 1965-66. The estimated figure for 1968-69 is 77.9. The situation in regard to the age-group 11-14 is even worse.

This is then the brief story of the growth of primary education in India in the modern period. To end, one cannot help citing Parulekar who said long back that if universal literacy is the aim the "education must pour and not trickle".

Our National Aspirations and the Role of Gandhian Educational Thought in Realizing Them

ANIL MOHAN GUPTA*

INDIA HAS promised her people a democratic form of government and a socialistic pattern of society.

Democracy is "a logical consequence of general human right to moral self-determination." The concept, "equality of man" is its ethical basis. It is the "rule of the people, by the people, for the people." The most fundamental tenets of democracy are : (i) the dignity of the individual, and (ii) freedom of thought and expression. India has chosen herself to be a 'constitutional democracy' where the powers of the majority are required to be exercised within a framework of constitutional restraints designed to guarantee the minority the enjoyment of certain individual and collective rights, such as freedom of speech, religion, association etc.

Socialism is essentially a movement that aims at the establishment of a classless society and the liberation of the human spirit, as well as the abolition of physical want. The concept 'equality of man' is the ethical basis of socialism also; but the emphasis here is on economic rather than on political equality. India's endeavour is to ensure both political and economic equalities of her citizens, through non-violent means.

In practice, the emphasis on individuality and freedom in democracies leads to irreconcilable economic inequalities. In spite of various socialistic measures taken by parliamentary action, democracies remain predominantly class-ridden, volcanoes of class-conflict. The socialistic movement, on the other hand, aiming at the liquidation of the privileged classes, takes recourse to the insurrectionary action and gives birth, in the name of the Dictatorship of the Proletariat, to a form of single-party government, where the

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Party—an infinitesimal proportion of the total population—becomes the only source of political action while remaining entirely exempt from popular control. Such a form of government, though it may act in the name of the people, is nothing but an absolute negation of democracy. In practice, therefore, the terms 'democracy' and 'socialism' seem to be incompatible.

Gandhiji offers a new synthesis. Liquidation of the privileged classes, according to him, cannot liquidate 'capitalism', as long as it reigns supreme in the human mind. He, therefore, proposes to liquidate it at the very source, through proper education. Gandhiji abhors State interference because it "represents violence in a centralized and organized form". It is "a soul-less machine" and "can never be weaned from violence to which it owes its very existence". "Although while apparently doing good by minimizing exploitation," Gandhiji concludes, "it does the greatest harm to mankind by destroying individuality which lies at the root of all progress". He professes his unshakable faith in the intrinsic goodness in man. The eternal yearning in him to expand himself beyond his bodily limits is spontaneous and is an undeniable reality. He recoils into his narrow shell only out of fear, greed and ignorance. Gandhiji proposes to eliminate these distortions of his true nature through education.

Education is nothing but conditioning. But sincerest efforts, in this direction, have often failed because of artificial and untrue barriers being placed before the evolving human spirit. Gandhiji refuses to accept that any ready-made theory can be the goal of education. He believes that ceaseless search for Truth should be the only goal.

Truth, according to Gandhiji cannot be realized through reason and book-learning alone. Our being is a unity, and not a mere conglomeration of some diverse unrelated factors like thinking, feeling, willing etc., which are mere abstractions. Truth reveals itself to our entire being. "Truth is," Gandhiji says, "by nature self-evident. As soon as you remove the cobwebs of ignorance that surround it, it shines clear". These 'cobwebs of ignorance' are the impurities that are in us.

The self can only be purified by love. Truth as the end and love or non-violence as the means are the only two fundamental values that Gandhiji has placed before us. He claims that both are inherent in our nature. Yet, he asserts, that the purification of heart for the unswerving pursuit of Truth is not a mechanical process. "It is the finest quality of the heart and comes by training". This is the first principle of his educational practice.

Reason by itself, Gandhiji asserts, can never realize truth. "Attribution of omnipotence to reason" he says, "is as bad a piece of idolatry as is worship of stock and stone believing it to be God. I plead not for suppression of reason but for a due recognition of that in us that sanctifies reason". "Truth and non-violence," he reminds us elsewhere, "are not for the dense. Pursuit of them is bound to result in an all-round growth of the body, mind and heart."

It is in this context that he looked out for a suitable medium of instruction that would help such synthetic growth. He found in socially useful productive manual work such a potentially sound educational medium. This is the central plank on which education, as understood by Gandhiji, stands, though this is not the only plank and the emphasis on it is not the same at all stages of education.

"By education," Gandhiji says, "I mean all-round drawing out of the best in child and man—body, mind, spirit." "By spiritual training," he explains, "I mean education of the heart." The self-centric beast in us, that is guided by the pleasure-pain theory, resists manual work that does not bring it immediate self-satisfaction. Education of the heart means the conquest of this brute-self and the emergence of the higher-self in us that can identify itself with others. Socially useful productive manual work is eminently suited to this purpose. To understand the needs of the community, to willingly forsake pleasure and to undertake manual work that may not satisfy any immediate personal need are the essential prerequisites of such work. These, in their turn, generate love, cooperation and self-confidence, transmute greed into self-sacrifice, enhance physical and moral fearlessness, promote insight into the community relationships and awareness of, how through action, done either individually or as a group, one can effect changes and meet social needs. "Suffering, cheerfully endured," says Gandhiji, "ceases to be suffering and is transmuted into an ineffable joy." These are the elements that fashion the "Socialist Individual." This is moral education and community service all moulded together. Importance of such education is universally recognised. Communist education, which aims at producing 'New Man' in the communist society has attached great importance to moral training. But, in spite of sincerest efforts, it has essentially failed, because of the emphasis on sloganizing and artificial imposition. Gandhi's solution is to replace imposition by unfolding. In Britain, significant results have been obtained from education through community services. Yet, it does not permeate the entire personality of the educand; it has remained an isolated subject only.

Introduction of socially useful productive manual work in schools is most furiously resisted on the ground that it will encroach on the already inadequate school-hours for intellectual pursuits. The objections are based on various misconceptions.

Briefly they are :

- (i) Psychologically, it is impossible for any child of the elementary school age to stand the strain of intellectual gymnastic, almost continuously, for about six hours a day. Children mentally sleep over the last few periods. Introduction of manual work reduces mental fatigue and saves wastage.
- (ii) Such work, if scientifically and educationally done has four stages—(a) planning, (b) preparing, (c) executing, and (d) evaluating. Of these three are predominantly intellectual. So the time devoted to such work need not be simply deducted from the time allotted to intellectual pursuits.
- (iii) Intellectual development is not mere acquisition of information. It is rather the development of certain attitudes, skills and habits that make acquisition possible. An intelligent use of the bodily organs in a child provides the best and quickest way of developing them. It is foolish to set before him the impossible task of memorizing the endless quantum of information. This can only serve to retard both physical and mental growth.
- (iv) Book-learning provides little motivation as the contents are seldom related to life. That even the most intelligent children avoid difficult subjects, that might have sharpened their intellect better, has been amply proved in the U.S.A. The only motivation comes from the external examination with all the baneful effects. Socially useful productive work is vitally related to life, and, therefore, excites vital interests in the child. This ensures involvement, and increases intensity and speed of intellectual pursuits. Evaluation, here, is necessarily a continuous built-in process.
- (v) Work provides natural opportunities to individualize education and, thus to provide for individual differences. One can do a work only at one's own pace and problems involved in it can be identified and mastered in accordance with one's own abilities. This, incidentally saves the child from the tyranny of arbitrary time-tables and consequent crisis of shifting attention. Fictitious claims to intellectual superiority, mostly to hide one's hatred for manual work, can also be best evaluated in this way.
- (vi) Work is best suited to teach one to effectively and efficiently handle the proper reading and references material

at the proper time and, thus, to develop proper library habits rather than the faulty habit of indiscriminate reading.

That education through work can develop the body and promote industriousness need little elucidation. Scientifically done, it can be a source of perfectly balanced physical education. Besides, it promotes appreciation of beauty and harmony, develops the spirit of not being satisfied with anything imperfect, sincerity of purpose and carefulness, which as a nation, we do so miserably lack.

This, in brief, is an outline of how educational work can become an effective medium of synthetic growth. The fusing medium, suggested by Gandhiji, is meant to save time, repetition and consequent confusion, but, above all, to emphasize the essential unity of the entire educational process.

Such work may be introduced in every school immediately with the most easily available tools and materials. Where necessary, we may start it as properly supervised home-work. It is not the modernity or complexity of a tool or a material that makes an educational work forward-looking, but its ability to promote the moral, intellectual and physical growth of the educand. Anything that is beyond his comprehension or competence stifles his growth.

Basic education is said to have failed because of an administration which was without proper knowledge, understanding, faith and initiative, and also because of a crowd of workers who had no correct or adequate training, and lacked proper guidance, aids and tools. Indeed, we could not even give it a proper trial. Gandhiji insisted that, if we can properly train our citizens, we can certainly develop a socialist society through democratic means. At a time when, in India, the State is continually encroaching on the freedom of the citizen and yet, social and economic disparities continue to increase, when contempt for law and order is so rampant and unblushing, when public and private morality and sanity have reached a new low, when people are losing faith in the significance of parliamentary elections and rumblings of insurrectionary action are getting more and more distinct, it would be wise of us to lend more respectful ears to the counsels of Gandhiji.

Science in Primary Education

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AND
DR. B.D. ATTREYA†

Why to teach Science in Schools ?

THE RAPID developments in the field of science and technology and their impact on all the facets of Indian life both in rural and urban areas, are fairly noticeable. The traditional agricultural practices are changing fast with the application of new scientific discoveries yielding more and better crops. Progress in the understanding of the intricate mechanism of living things and discoveries in medicine and public health are helping to conquer diseases and making the common man generally healthier and happier than ever before. New knowledge of various natural phenomena are enabling man not only to control and utilize nature's resources to more useful purposes but it is also helping to develop newer and better substitutes of natural substances for the increasing demands of comforts and consumer goods, in other words leading to better standards of living.

This impact of science and technology has also created certain demands on our society.

Firstly, it has made 'Scientific Literacy' essential for every citizen to understand the world he lives in and to participate intelligently in its future development. The future citizen will certainly be required to decide on important issues like greater industrialization of the country, mechanisation of agriculture, development and use of atomic energy for peace or defence purposes.

Secondly, the technological developments have created new vocational demands of skilled personnel at different levels for manning the various industries and enterprises. For the training of these personnel adequate knowledge and skills in sciences are necessarily required.

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Thirdly, to compete with other nations of the world and be independent of foreign help for ever, there is also a need to create conditions for the development of prospective research workers and creative scientists to extend the frontiers of science. This calls for the development of a sound foundation of good science education at the primary level.

Need for rethinking on School Curriculum

All these demands of society need a rethinking of our whole educational system and the place of science in general education. The broad goals of education are the proper development of the child as an individual and the right development of the child as a useful member of society. In the present age science has to become an integral part of general education at the primary stage not only because it forms the broad base of the pyramid of school population, but also because many pupils who leave formal education thereafter may never get a chance to study science later in life. This will fulfil the task of developing citizens with scientific literacy and lay the foundations of a good science programme at the higher stages in school and college.

At present theoretically speaking science continues to be taught in some form or other in all States at least up to the middle school stage. It has been felt that the outcome has been negligible both from the point of view of knowledge and understandings as well as of skills and attitudes. A great concern has therefore been felt by educators, laymen and scientists alike for improving science education at all levels of schools.

Science has two aspects. Firstly, it is the knowledge of scientific facts, principles, laws and their various applications. This is the 'product' of science—the traditional aspect of science content. The other aspect of science is how scientists gain new knowledge e.g., through observation, classification, investigation, problem-solving and testing new ideas etc. This is the "process" of science or the way science has developed. While the "product" of science is growing at a very fast pace and may indeed be considered infinite, the "process" of science remains basically unchanged and the chief tool to gather knowledge in all cases. This is principally responsible for building up patterns of thinking, called "scientific attitude."

How to teach Science at the Primary Level

For the teaching of science at the primary level, educators usually think of cashing on the two inherent qualities of a child—the eternal curiosity to know about things in general and his love for activity

The present day concept of science teaching at the earliest stage is therefore 'Learning by Doing' so that the basis of all knowledge is from first-hand experiences gained through investigatory activities. The idea is to place the child in a problem situation where he gathers data, performs certain activities, finds the link between the causes and the effect, generalizes and if necessary verifies further to reach the truth of the matter. The important point at this level is not to teach the 'product' of science but the 'process' of science.

For the activities to be first-hand the child has to be involved in them at all stages. Unfortunately, in the present circumstances of limited facilities of equipment many of these activities remain confined to the form of teacher demonstrations only. The pupil not only gets his curiosity satisfied by working alone or in groups but he also keeps active and acquires certain skills both mental and manipulative which are useful to him later in life. Thus, the outcomes of knowledge, skills and attitudes develop readily. An opportunity to work fosters the spirit of self-reliance, cooperation and democratic living.

Necessary Conditions for Improvement

The key to the success lies in the teacher who must be rightly trained and be skilful in performing activities. He should lay more stress on the 'process' of science rather than the 'product' of science. The usually over-worked teacher could do it all if he had the necessary equipment and materials in the form of ready-made kits.

If this is accepted as the proper concept of science teaching at the primary level there are certain essential inputs for its successful implementation. For instance,

- (i) The curriculum for teaching must be based on activities dealing with the environment of the child, both physical and biological.
- (ii) There must be sufficient opportunities for activities of various kinds both in and outside the classroom such as experiments, excursions, field-trips etc.
- (iii) The instructional materials should be of high educative value.
- (iv) Facilities of adequate equipment and materials be made available. They could be simple, indigenous, inexpensive improvised equipment.
- (v) The teachers must be trained to emphasize the "process" of science rather than the "product" of science
- (vi) Equipment should be available in the form of "kits" for all types of experiments and demonstrations.

Changes in the last decade

During the Second and Third Five-Year Plan periods a number of schemes were taken up by the Central and State Governments to improve science education at the school stage. While they emphasised mainly on better provision of equipment and facilities for teaching elective science courses at the high school level, for the primary school they aimed at improving syllabi, textbooks and some guidance material for teachers. However, much remains to be done.

The task ahead and the problems

Considering the future needs, the development of science education at the primary level is a gigantic task constituting numerous problems which may be considered around four focal points. They are

(1) The problem of better instructional materials

The first task to tackle is the production of improved textbooks keeping in view the following points *viz.* they should

- (i) have correctly presented science concepts
- (ii) take into account the child's interests and abilities.
- (iii) be related to his physical and biological environment
- (iv) be richly and rightly illustrated and be physically attractive.
- (v) be based on the vocabulary of the child and be correlated with language and social studies text material.

For the better teaching of such books Teachers' Guides are a must. It may be pointed out here that there is need to develop such materials at one place with provision to suitably modify it at the state or regional level.

(2) Problem of equipment and facilities

If science teaching has to be experimental and investigatory, necessary equipment has to be supplied. It may not be financially possible to support such a programme immediately, yet its need could hardly be over-estimated. A portable kit integrated with the text may also be developed indigenously at one place. Its mass production is possible in collaboration with states.

(3) The problem of training

Obviously along with better textbooks and equipment a better teacher should also be produced. This could be done by improving pre-service and in-service programmes. The major aspects of the future pre-service training programme should lay the emphasis on :

- (i) an integrated course of content-cum-methodology.
- (ii) the 'process' approach of science teaching

- (iii) the development of manipulative skills in the prospective teacher.
- (iv) more skill in the use of audio-visual materials to bring variety of experiences to the pupils.

For in-service training it is necessary to plan programmes for teachers so that,

- (i) the existing gap of content knowledge is filled.
- (ii) familiarisation with the new content and its methodology is made.
- (iii) training in manipulative skills is given.

Since the magnitude of the task of training teachers is enormous it should be conducted at various levels. A three-tier training programme has therefore to be evolved. The NCERT may be made responsible to give ideas and guidance to the key personnel from the States to organize the training programmes for the method masters of the training colleges and schools. These method masters will finally train the actual classroom teacher.

(4) The problem of follow-up

The initiation of programmes alone is not enough. To sustain any programme, States will have to organize a machinery to supervise and assist the programme.

Vitalizing Primary Education Through Work-Experience

S.C. CHAUDHURI*

IT IS almost a century now that the slogan for work-oriented education was first raised. But unfortunately it never took off from that stage. The different commissions on education and the national leaders who have given some thinking to education have all felt the need to include some form of manual work in education for the development of personality and vocational efficiency. To quote a few, Tagore observed in the twenties "Mere book learning is a poor vessel to take one across the high sea of life. The time has come for the educated gentry and their children to put the hand to uses other than mere quill-driving. . not for earning a livelihood alone but also for acquiring all-round education." Mahatma Gandhi observed in the thirties "Let us now cry a halt and concentrate on educating the child properly through manual work, not as a side activity, but as the prime means of intellectual training." The Education Commission (1964-66) had again to stress the need of including work-experience as an integral part of education at all stages. Though the talk about work-experience has been in the air for quite some time now the impact of this suggestion is not visible to any appreciable extent. The following steps are essential for the introduction of work-experience as an integral part of education.

At the outset it is necessary to clarify the concept of work-experience and see that the correct interpretation filters down undistorted to the field workers at all levels. In a country where education is a State subject interpretations are given to the educational innovations in their own way. The term 'work-experience' itself is being interpreted in many ways by the general education workers. According to an interpretation mere quill-driving can

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also be regarded as work for work-oriented education. According to another interpretation, and which is the other extreme, manual work devoid of any educational outcome is regarded as 'work' under the present context. Some thinkers argue that any kind of physical work emanating from and subservient to any curricular subject should be regarded as work-experience. The fourth interpretation restricts itself to the vocational aspect irrespective of the fact whether the work is predominantly of the mental or physical type. A fifth interpretation is related to on-the-job-training. A sixth confines itself to jobs and hobbies. All these interpretations however overlook the fact that meaningful, educational, creative and productive manual work has a place in the educational programme in its own right. Further, such educational outcomes that are not forthcoming from other curricular areas are also vital for developing nations.

The interpretation of work-experience may also depend upon the type of education that is being provided. As the purposes of the different types of education are distinct from one another, the nature of work-experience may differ accordingly. Thus for general education whose goal is the development of the total personality, meaningful, educational, creative and productive manual work would help in developing desirable attitudes towards manual work and manual workers along with proper work-habits and creative thinking. It will also help in internalizing knowledge and developing insights into the problems of production. On-the-job training in such a type of education neither helps to achieve the desired goals nor the outputs commensurate with the inputs. But, for vocational and professional education whose aim is to develop occupational proficiency, on-the-job training will constitute effective work-experience. Again, for continuation education, on-the-job training for higher types of jobs will constitute work-experience.

In order to be meaningful, the activities should be problem-solving and related to the basic needs namely food, shelter, clothing, health and recreation. Educational work involves problem sensing, arriving at hypothetical solution, collecting the necessary materials and tools, actual solution of the problems through manual work and finally evaluation and the feedback. In fact, the work-experience should be forward-looking, and be provided, as far as possible, under real production situation and should result into socially useful products. The capacity of the children has to be kept in mind while fixing the targets.

The nature of the meaningful educational, creative and productive work may vary from stage to stage. Thus, in the lower

primary classes, there may be an emphasis on exploration and creative self-expression. In the upper primary classes the emphasis may be on proper tool manipulation, production and maintenance.

Before launching the programme of work-experience like any other educational innovation, it is necessary to orient the field workers properly. The innovations are arrived at by higher level workers. For developing the desired insight among the field workers, it is necessary to produce enough literature in the form of curriculum plans, curricular guides, teachers' handbooks, source books, tools for evaluation, preforma for keeping records, and also teaching aids. The start should be made at the teacher training institutions. The pre-service course should be modified to meet the new requirements. In-service courses should also be run to re-train the existing teachers. For this purpose guides have to be prepared for teacher-educators too.

It is also necessary to create proper climate for the introduction of this programme. Unless the present attitude of the society towards manual work changes, the desired sanction and cooperation will not be forthcoming. For this purpose a nation-wide campaign has to be made. The different mass communication media like radio, T.V. films and newspapers have to be harnessed for this purpose. In fact, an awareness has to be created in the masses for this purpose. Parent-teachers associations and village panchayats can play a vital role in this respect.

Lack of resources is another hurdle that has to be overcome. However, there are evidences, when there was a determination behind a movement, there was no difficulty in mobilizing the resources from the masses. Only the sincerity of purpose and the potentiality of the scheme has to be improved. The example of steps taken by the U. P. Education Department at the time of launching the Re-orientation scheme in 1950 may be remembered with some profit.

Drastic overhauling of the curriculum, re-organization of knowledge contents, rethinking on the weightage to be given to the different areas of the curriculum and developing suitable techniques of evaluating the teaching-learning is another gigantic task that has to be faced. Tinkering of the curriculum here and tampering there will not help to achieve the desired goal. The custodians of discipline areas in the curriculum have to forego their prerogative and cooperate with the curriculum workers to forge an effective programme. It is now universally admitted that the present curriculum has not been able to deliver the goods. There is a lot of deadwood in the curriculum which has to be got rid of to

accommodate new innovations. One of the greatest drawbacks in this country is that the school curriculum is developed in isolation, away from reality. Opinion and advice of the parents, public-men, industrialists and businessmen are rarely sought. In developing the programme of work-experience, besides the above mentioned, experts in technology, production and higher education should also be involved. It is only then that a fresh and forward look can be given to this programme. As has been stressed by our President, for a long time to come we have to depend upon the home and cottage industries types of production.

Thus it may be concluded that for vitalizing primary education through work-experience it is necessary to launch a nation-wide campaign. In the International Education Year a pledge may be taken to take a bold step in the direction of work-oriented education at best at the primary stage. The first quarter of this decade may be utilised in making the necessary preparation like conducting pilot projects and trying out concrete programmes and pooling resources etc. The actual programme may be launched in the second quarter. A beginning should be made in as humble a manner as possible, may be, in the form of experimental projects. As curriculum development is a dynamic process, the progress of the programme has to be watched and necessary adjustments made. Finally, towards the end of the seventies, assessment of work-oriented education may be made for making it more effective in the eighties

Work-Oriented Education

V.R. MUDHOLKAR*

ACCORDING TO Sri Aurobindo, the aim of education has two aspects, the individual and the collective. The latter pertains to the development of the individual into a good citizen.

One may concede that the most ubiquitous factor in to-day's social milieu is INDUSTRY (including agriculture), its materials, processes, and problems. Hence any educational design to prepare youth for intelligent and effective citizenship in the modern world, must equip them for understanding and dealing with modern industry, its processes, products, and problems. This equipment can be provided through participation in activities typical of industry and through technical instruction in workshops attached to schools made available for the purpose.

The basic theory of work-experience is "LEARNING BY DOING." Children learn best through active participation in concrete experiences which are closely related to their physical and social environment. Educational thinkers like Rousseau, Pestalozzi, Froebel, Della Vos, Otto Soloman, Dewey etc. in the West and Sri Aurobindo, Tagore, Tilak and Gandhiji in India, have, with one voice stressed the psychological principle that the child uses "hard labour to the profit of its mind." "Emile will learn more" said Rousseau, "by one hour of manual work than by a whole day's verbal instruction." Tagore advised "the educated gentry to put their hands to uses other than mere quill-driving not for learning a livelihood alone, but also for acquiring all round education." Gandhiji has very aptly observed that manual work develops "THINKING FINGERS."

Thus work-experience is designed not so much to produce technicians or occupationists as to aim at a psychologically sound and effective method for educating the whole man."

American educationists and even industrialists hold similar opinion. The realisation of the educational aspect of manual training

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dates from the days of the INDUSTRIAL REVOLUTION. They believe that democratic considerations demand that all youth, whatever their economic or social status, must be prepared for effective vocational participation so that the social need for trained personnel for various technical, mechanical and industrial jobs may be satisfied. The two world wars further necessitated the systematic organisation of manual training as an integral part of general education, and determining the equipment and materials the training required. For example, some schools are equipped with work-shops like wood-shop, sheet-metal-shop, electric-shop etc. Boys undergo training in each work-shop in turn, during the Junior High School course. In some schools courses are arranged in general work-shops where work of more than one type is provided. In Grades I to IV of the elementary school, children do simple hand-work with paper and clay, exhibiting life at home and outside. In Grades V to VI, they work under special teachers and make simple furniture, weave cloth etc. After this boys enter Junior Secondary Schools where the training is more technical. They do wood-work, metal-work, mechanical drawing etc. Practical work and training are supplemented by talks, films and visits to factories. Instruction promotes good thinking habits, effective ways of attacking problems and creative ability. Information is given through talks and films. Textbooks are rarely used. The teacher demonstrates the operations to be performed. It is interesting to note that some schools run "HOME MECHANICS SHOPS" where boys bring from their homes articles requiring repairs. Liaison between schools and industry is close.

It will be long before the programme of work-experience in all our educational institutions assumes these dimensions. Heads of schools will have to begin from scratch, taking such help as may be available from craftsmen, technicians, agricultural and industrial experts, Community Development Organisation, Small Scale Industries Board, Handicrafts and Sericulture Boards, Khadi and Village Industries Boards etc. The last may be particularly helpful as they have readymade schemes, suitable for students, like manufacture of hand-made paper, non-edible-oil-soap, bee-keeping etc., for which technical assistance and grant-in-aid may already be available.

The educational significance of work-experience has been recognised even by persons strictly dedicated to spiritual realisation. Witness what the Incharge of technical training in the International School of Education at Pondicherry has to say :

"The question is put to us why we have introduced technical training in Sri Aurobindo Ashram. There seems to be

implied in the asking that there is some incongruity in the idea that we are obliged, therefore to explain.

"Yoga encompasses every aspect of human endeavour, so that nothing can be left out of its orbit.

"Knowledge exists within us ; it has only to be awakened. But in order that the knowledge, if and when it awakes in the student be properly understood, used and developed, the mind must be prepared to receive it and express it. It is here that technical training plays its greatest part.

"In the present world, where technology has advanced so much, where the great complexities of matter and physical forces have been studied in such detail, the new knowledge that now comes is also much greater. This vast knowledge will need much better instruments to receive and utilise it. Hence we have to take our students along established paths of Science and Engineering, so that they know what has come down already and thus be prepared for further descension of knowledge.

"Our object is to awaken the student to knowledge so that it comes to them to enrich their beings and develop their personalities—so that they can better express themselves in their aspirations .. We insist on an integral development where body, mind and spirit move forward to a larger synthesis "

Considering the present condition of our schools in general, there cannot be a single rule regarding activities to be selected for offering work-experience or the time to be allotted to the same in the school time-table. Arrangements in respect of these matters will differ from school to school in view of environment, activity selected, technical guidance and equipment available and on whether or not the activity is to be conducted in or near the school or at some distance from it. The heads of institutions should have freedom to make due arrangements and experiment, according to the facilities available.

In Primary Standards I to IV, children may do paper-cutting and clay-modelling. In the higher standards kitchen-gardening, work on farms or spinning on Ambar may be introduced. In Secondary Schools, development of a "HOME MECHANICS SHOP" may be interesting to students, teachers and parents since the shop caters to the daily needs such as repairs to furniture, photo-frames, time-pieces, watches, bicycles, stoves etc. Articles like small shelves, and stands for cups and saucers can also be prepared. Technical aid and materials will be locally available. Teachers and students together may undertake repairing and polishing furniture, up-keep of play-ground, white-washing the school, running a cooperative or

a canteen, until regular technical courses can be organised. In rural areas, work on farms should be given top priority in accordance with the Education Commission's specific directive that in view of the "importance of agriculture in our country, every citizen, irrespective of his residence, occupation or status, should be made aware of the problems of agriculture and rural life and in short, receive an agricultural orientation as part of his education."

Teachers should never forget to correlate the processes of selected activities to the relevant areas of academic subjects. Correlation should not be artificial, stretched or far-fetched.

It is Government's responsibility to provide adequate funds for the experiment and provide due facilities. Teachers may have to confront "doubting Thomases" who are chary of manual labour and its utility or necessity as an effective educational measure. There is also lurking in the minds of a large number of our country-men an apathy for, if not prejudice, manual labour accompanied by a lack of appreciation of the dignity of labour. The programme of work-experience will succeed only if it will have a full measure of willing and active popular support. There is need of a systematic propaganda, through the press, the radio, conferences and seminars to create a favourable social climate for this educational venture. High level attention to this matter seems necessary. The aid of polytechnic institutions, Agricultural and Engineering Colleges, Institutes of Technical Training and factories of industrialists like the Kirloskars will be required to organise short-term training courses for teachers and to provide to pupils work-experience. For this purpose also high level move may be necessary. The Model Primary Schools of State Governments, and Central Schools run by the Central Government should set the pace in the matter of introducing the programme of work-experience in schools. The teachers, the public, industrialists and Government must all cooperate if work-experience in schools is to be given a respectable status so that it may fulfil its objective of contributing to the industrialisation of the country and also aid national integration by loosening the rigidity of social stratification, by strengthening the link between the individual and the community and by creating bonds of understanding between the educated and the masses.

Programmed Learning: its Relevance to Work-Experience

DR. C.H.K. MISRA*

The Nature of Programmed Learning

PROGRAMMED LEARNING is a way of anticipating students' responses during the teaching-learning process and of pre-designing the entire gamut of learning experience to a pre-determined set of specific goals or objectives. This as such, should be desirable in all forms of teaching and learning situations. To the extent we can define specific objectives we can successfully maximise the performance of the learners in connection with the learning skills. The added advantage of programmed learning is that it uses reinforcement theories of learning as evolved by psychologists and educationists in controlled laboratory conditions. Many instances are available which show the superiority of this method in training industrial workers, soldiers and students in various stages of education. There are 5 major characteristics of a programmed material, namely,

1. The material is broken down into small steps or "frames". The sizes of the steps vary according to the level, subject matter and stage of learning.
2. Frequent active responding is required of the student like making answers, or choosing from answers given or even some muscular movements.
3. Immediate confirmation of right answers or correction of wrong answers for each response is provided.
4. Each of the steps is tried out on a comparable sample of students and their effectiveness is determined ahead of time.
5. Each student gets a copy of the material and can pace his learning himself. If he is a slow learner, he can learn slowly and if he is a fast learner he can learn quickly.

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Programmed learning accepts the responsibility for the management of the learning situation. It sees to it that the student does learn and takes the blame on itself for the student's failure. Each inter-action between the material and the learner is, in a sense, pre-determined.

Work-experience on skill learning

The concepts of work-experience, polytechnical education and craft education involve manual skills. Programmed learning has been successfully used in modifying all types of behaviours including manual skills

In a series of experiments conducted by O.K Moor (1966) and Alan Ron Anderson in a school environment have conclusively shown that through the use of equipment such as the "talking typewriters", 4-year old children could learn to type like adults. Perhaps the most striking examples of the effectiveness of programmed instruction come for its use in industrial training (Hughes, 1962) which include manual and semi-automatic skills. If we take stock of the entering behaviour of the student and the actual terminal behaviour which we expect him to come out with as a result of instruction, we can handle skill learning much better. One of the most important findings out of the researches on skill learning is that as the student moves through the various stages of skill learning, the particular combination of abilities which the skill requires changes (Fleishman and Hempel, 1954, 1955 ; Fleishman, 1955). In other words, the combination of abilities at the entering stage may be quite different from the combination of skills required later in practice. Thus any prediction about the student's ultimate success based only on the initial combination of abilities could be misleading indeed. Therefore, while anticipating skill learning, we cannot stop at initial analysis of the psychomotor abilities of the student only. One of the first teaching functions therefore is to analyse the task one plans to teach.

Skills can be described in terms of their constancy, continuity, coherence and complexity. Also the sequence in which the movements are to be executed will be important in itself. "Task analysis" can begin with the observation of a successful performer. We can also take some logical arrangements provided by a subject matter expert. For a more cognitive area like programming a text we may take the approach of specifying the subject matter resembling a detailed table of contents first.

Behavioral analysis of skill

We may then proceed specifying the various performances re-

quired for each one of the specified content. For each one of them too, we shall have a specific instructional objective and a post-test item meant to evaluate the attainment of the specified objective in question. We may then proceed to analyse the subject in terms of "stimulus" and "response". For us, "stimulus" will be a *teaching activity*. "Responses" will represent students' activities. The analysis of a skill as a single chain of SR units, however, becomes difficult when complex and simultaneous movements are involved. The analysis into SR units is probably one of the best ways for identifying basic components of a skill, but it is not always the best for showing *relationships*. There are other ways of determining relationships between various components which may be helpful in preparing our programme (e.g. the "ruleg" system of Evans, Glasser & Homme, 1962).

Available abilities and skills of the learner

The next step will be assessing the entering behaviour of the student. There are obviously certain skills present in the student at the beginning which should be taken advantage of in formulating our teaching programme. The assessment of entering behaviour can take three forms.

1. If the analysis of the skill in terms of SR units is in a single chain, we should determine whether the student has acquired all the links in the chain, that is to say, all possible SR units. If every link is a stimulus for a succeeding link, the absence of one link means that the skill cannot be performed.
2. If we analyse in the form of content skills necessary for the learning of more complex skill we must determine if the learner has learnt all the components.
3. We should assess and manipulate psychomotor abilities of the student. There are exact methods available from experimental psychology, psycho-physics and human factors engineering. This assessment must consist of measurement of the psychomotor abilities of the students, an analysis of the abilities required by the skill of various components. It is but an attempt to map the task required and the students' ability together in a way that will make learning possible.

When the student lacks or is underdeveloped in the necessary abilities, the teacher can provide him the opportunity to develop the abilities to the level necessary for learning. For example, an analysis of the abilities that is required in a task may indicate that the speed of change of direction is an important ability in the advanced practice of the given skill. In this case the teacher can provide remedial exercises

to the students who lack this ability. In the same situation, the teacher may decide to abandon teaching the skill for which the student lacks the necessary physical abilities and to teach him those skills for which he will be more fit. If he knows the student's level of psychomotor abilities and the ability requirement to the skill in various phases of learning, the teacher can predict where the student will have his greatest success and difficulty and consequently plan to assist him when necessary.

Imparting skills under the framework of Programmed Learning

The next step is to arrange for training in the component units, skills and abilities. This step has two performances. It provides the student with the opportunity to learn the missing SR links or component-skills, or to develop the pre-requisite psychomotor abilities and, at the same time, provides the student an opportunity to learn the skill components so well that he can focus his attention on the newer aspects of the complex task.

At the beginning of the actual teaching of the over-all task or skill the programmer shall have to describe and demonstrate the skill. In skill learning usually the student listens to instructions, observes demonstration, tries out different component-skills which he already has and then somehow starts learning the new skill (Fitts 1964). We should go beyond verbal instruction at this stage. It is found that to combine advantages of demonstration and feedback, films can be used. They enable the students to participate verbally and also in a psychomotor way (May, 1946). Most instructors stress the importance of performing demonstration at an early stage of learning. It is important to remember particularly for students of elementary class that verbal instruction should be kept minimum and should deal with only the most essential aspects of skills.

We are now in a position to tackle the situation of skill learning under the framework of programmed instruction. For programmed instruction we must have a source from which stimuli will be available for the student in a graded manner. This can be done through books, teaching machines, short-circuit television, projected slides or movies. This can also be done through an actual demonstration by the instructor. Next, we need a storage receptacle for recording the responses of the student. Here, in addition to the answer sheets provided at the desk of the student we can have psychomotor tasks which can be inspected later by the instructor. If the chaining has been done very systematically so that one part of the job cannot be done earlier to another, we can divide the whole task into several sub-tasks and get the responses checked or evaluated. Another significant component is the provi-

sion for confirmation or correction. It will be seen that all these components are available in a skill-learning situation.

Styles of Programming

There are different ways of presenting a programmed material and also different styles of preparing the same. Where the chaining is done on a straight line basis so that stimuli responses are chained in a single file, frame after frame, the style is referred to as the "linear style". There are other kinds of programmes where a correct response allows the student to proceed directly to the next step of programme while erroneous responses "branch" him to supplementary material designed to correct the particular error made. This style is called the "branching style". Branches may vary in complexity and a branching programme may merely present a short series of supplementary frames and then allow the student to return to the missed frame. More elaborate forms of branching take whole sub-programmes. Another style of programme preparation is called "mathetics". Here the final task is shown first and then gradually larger and larger chunks of behaviour are elicited from the student till he does the whole task independently. For example, a mathetic programmer will conceive of motor driving by taking the steering wheels first and then gradually coming to other parts of driving behaviour. The whole analysis of learning experience under this type of programme is through a process called "backward chaining". A recent development in programming has been the concept of group pacing, in other words, instead of allowing each student to move at his or her own pace, small groups of students can be paced so that the slow learner gets the advantage of working with a fast learner. The choice of style, or course, will depend upon the nature of the task. For example, one cannot think of a group programme in a car driving situation, but in an experiment in the physics laboratory it may prove extremely useful.

Advantages of Programmed Learning

Obvious advantages of programmed learning for application in primary stages of education have been shown by exact experiments. (Keislar 1960a and 1960b). The advantages accrue from the following conducive conditions :

1. An expert programmer and a subject matter expert can reach a large number of students in a single operation.
2. Misconceptions held by minimally qualified instructors will not hamper the learning of the students.
3. Through immediate correction further errors do not lead to complications in the learning sequence.

4. The slow but intelligent learner is not at a disadvantage in catching up with the class.
5. The fast learners can save time and utilise it for more useful educational experiences.
6. No embarrassment or group pressure is caused to a student who has not got enough skills to start with.
7. The need for separate examinations is greatly reduced.
8. Early and continued success experience augments student motivation.
9. Good instructors get more time for better use than performing rote drills.
10. It is advantageous for home education.
11. It is advantageous for remedial instruction

The following possible applications for primary education are envisaged :

1. Teacher training through correspondence courses through auto-instructional programme texts. This will be particularly helpful for new science and mathematics.
2. Tackling problems of single teacher schools : Carefully developed programmed texts and kits may be provided to single teacher schools. This will reduce the load on the teacher who can simultaneously supervise many classes.
3. Controlled home-study activities : Programmed material can be carefully phased and provided to the students who can fill up the response blanks with interest while learning.
4. Television lessons and Radio lessons : These can be profitably programmed (with response blanks provided to students) to supplement classroom teaching effectively.
5. Work-experience, skills and craft learning. Psychomotor programmes with kits will be very helpful for teacher training as well as student participation in the areas.

The varied application of programmed learning in schools, industries, military set-ups provide evidence of its effectiveness as an educational technique.

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Work-Oriented Education : A Critique of Education Commission's Recommendations

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ONE of the most important contributions of the Education Commission is its recommendations of work-oriented education at all stages. The recommendation is based on the fundamental objectives of National Education which the Commission has defined in advance.

Education is to be utilised as the main instrument for bringing about the desired social change. The Commission thinks that there is urgent need for the development of physical resources through the properly organised programme of education for self-sufficiency in food, economic growth and full employment, social and national integration and raising the living standards along with the development of human resources. Education has to play a double role in this respect, the development of physical resources at one hand and the development of human resources at the other. To combine the two different roles and to bring about the social change the Commission has suggested to relate education "to the life needs and aspirations of people." In the opinion of the Commission it will be better done if "it is related to productivity." The programme of work-experience sounds high in the recommendations for linking education with productivity.

Let us first see what the Commission exactly means by the term work-experience and then try to analyse in details how far it can achieve the desired objectives at the elementary stage.

What is Work-Experience ?

Work-experience has been defined as "participation in productive work in school, in the home, in the workshop, on a farm, in a factory or in any other productive situation." The productive situation has reference to secure rapid economic development for which education needs to be related to productivity. It is clear then, that according to

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the Commission the main object of making education productive is to make it economic oriented so that the two, namely, education and productivity may balance each other, in contrast to the present educational system which is too academic to be of material help in increasing national wealth. Hence it becomes quite clear that work-experience has economic-bias which leads to an increase in national income.

However, it becomes confusing when the Commission says that work-experience must be made an integral part of general education and should be "dynamic and forward looking". How general education is to be fused with this work-oriented and forward looking education is a crucial problem.

Commission's recommendations are not clear on this point and the issue seems to be confused. Some of the assumptions for work-experience which the Commission has put forward are praiseworthy but the methods, procedures that are suggested for making it an integral part are far from being realistic at the elementary stage when it leads to a kind of pre-vocational training.

Commission's assumptions for Work-Experience

Any one who reads the assumptions for work-experience is satisfied on the theoretical basis. The Commission insists on making work-experience an integral part of education because it is inherent in the very nature and organization of education. One is convinced about this on logical grounds. This is because the child grows up in society through participation in its activities which form the greater bulk of his education in a natural surrounding. Traditionally, it was called the informal education. On the other hand formal education tends to create an artificial atmosphere for the preparation of his future role in the life and society which is dynamic in nature. This means there is a wide gulf between the world of work and the world of study. The fact is accepted but how far work-experience is going to bridge this gulf by combining the formal and informal systems of education is again a new question. The present programme of the Commission does not appear to solve it.

Analysis of Work-Oriented Programme

The Commission hopes to establish a classless society free from exploitation by increasing the productive work and efficiency through work-experience. It not only aims to increase productive efficiency but expects some earnings for the student—either in cash or kind to meet the expenditure of his study. Here it treats work-experience as pre-vocational training to earn while

learning. In the general programme of work-experience where the Commission has suggested a number of activities such as paper cutting, model making, simple needle-work, pottery, leather work and actual work-experience in the industry, it also reflects the same nature. In this respect the Commission has followed the programme of work-experience in western countries designed for polytechnical education, especially in the U.S.S.R.

Such a programme is impracticable because it requires according to the Commission, specially trained teachers for higher primary and secondary schools and special instruction for this purpose. At the lower elementary stage it provides no scope for its implementation as an explanatory stage in the pre-vocational form.

The major problem is that of the trained teachers. Where are we going to find them? The Commission has suggested an alternative to this programme. It advises to use skilled craftsmen or graduates of vocational schools as teachers after giving them a short-term training. Surely, it may solve the problem of some institutions but it will narrow the view as it will draw a clear-cut distinction between the manual and intellectual work and start again the controversy which work-experience desires to end. Launched in this way it will share the fate of Basic education with which work-experience has a close similarity as both the philosophies centre around the vital principle of relating education to productivity. What is new in work-experience is its reorientation of the Basic education programme to the needs of the society, which is changing with the help of science and technology to keep in tune with the social order, when it has become frozen around the indigenous crafts and village employed patterns. But this novelty may not keep work-experience alive if implemented in the same half-hearted way as Basic education.

Again there is great confusion as regards the vocationalization of education as distinct from work-experience when the former is recommended to link with productivity. In fact, there is no clear-cut distinction between the two except at the time of dealing with vocationalization where the Commission states in p. 8.09 "we visualize the future trend of school education to be towards fruitful mingling of general and vocational education—general education containing some elements of pre-vocational and technical education, and vocational education in its turn, having an element of general education." But at another place it puts differently e.g. at page 7 where the statement runs "We recommend that work-experience should be introduced as an integral part of education—general or vocational"

To an average reader it is all very confusing. It seems that the Commission itself is a bit confused about the nature of work-experience which it needs to implement and that is why it is not in a position to decide its nature in the general programme of education and vocational education at different stages.

Work-Experience at Primary Stage

The term work-experience has created more confusion especially at the primary stage which can hardly be considered suitable for vocational education. What is the Commission's programme at this stage?

In the list of general programme of work-experience at the lower primary stage the Commission has suggested the following activities—paper cutting, card board cutting and folding, modelling in clay or plasticine, spinning, simple needle-work, simple planting indoors or on plots, kitchen gardening, etc. The question is how to make it productive in the economic sense at the primary stage. It is perhaps the most difficult task. One cannot imagine economic productivity at such an early age. The age-group 6-11 or even 11-14 will not be able to produce such finished work which may be saleable in the market to give economic dividends. It is hopeless to talk about self-sufficiency at lower or upper primary stage as it is an impracticable proposition. In place of economic return there will be wastage at this stage.

At the primary stage it is even difficult to engage the children in real situation such as spinning, working on the farm etc. It is only an ideal dream, children at the early primary stage cannot hold their attention for long periods of time and cannot get joy in such activities. They require free activity, self expression, continuous change of work, diversified activities in the classroom or outside it, than attending to a specific strenuous activity.

If work-experience is to be introduced with the aim of training for certain crafts it will not be difficult to predict that it will not achieve the desired end of developing technical skills and insight into productive process. For want of workshops, farms, factories and community centres to work in as well as suitable workers and literature in the field it will not achieve the planned goal even at the secondary or higher secondary stage.

At the primary stage it is simply out of the question. Instead of adding to the national income it will empty the pocket of the government by demanding huge financial commitment. Work-experience will be a costly affair. A poor country like India cannot afford such a costly venture in the name of economic return in the long run when they are not visible at the elementary stage.

The work-orientation programme needs reorientation and modification at this stage.

New Orientation at the Elementary Stage

Work-experience cannot be accepted in the form of economic productivity at elementary stage.

If work is to be introduced it should be in the form of activity—mental, social and physical to build desired patterns of behaviour, skills and sound attitudes to work which will foster intellectual and emotional growth rather than any other kind of gain. Definitely such a type of work-experience will be highly productive for the development of human resources at this stage.

It is doubtful whether work-experience not done in real situation cannot be productive. This is a limitation of productivity itself. Work-experience can be meaningful in terms of creation, re-creation and not production. Production may come as a by-product. Education will be meaningful through such activities which will help classroom learning and will make it interesting and useful. These activities will also provide healthy social habits and attitudes which are necessary for work. They will express the inclination and interest of the child for guiding him in future without giving vocational education at this stage.

The need is for a properly organized and integrated programme of physical, social and mental activities in the form of work-experience or bringing about a desirable attitude to work and create social climate for change. It requires pre-investigation and teacher orientation before drawing the programme of planned activities at this stage.

Definitely it will not require skilled craftsmen, special institutions, workshops, factories or farms but spirited teachers who understand the significance of their vital role in coordinating work-experience with the psychological and social needs of the child.

Talented School Teachers at the Primary Level—Their Identification and Training

DR. L. C. SINGH*

BEFORE THE problem of talented teachers at the primary school level is discussed it is both desirable and necessary to examine briefly the relevant background of the problem. It is found that there is a lack of uniformity in admission requirements for the teaching profession at the primary level and also in the duration of courses in different States as well as within a State. The educational qualifications required for admission for teacher training courses vary from middle school to matriculation or higher secondary. Besides, as observed by Prof Shukla, out of the 11,96,111 teachers working in our primary schools today, 26% are untrained and the percentage of trained teachers varies from 43.80 in West Bengal to 97.61 in the Punjab. Also the academic background of these teachers is not very high. Of the total number of teachers 22,907 (1.9%) are below middle pass, 5,94,354 (49.7%) middle, 4,93,682 (41.2%) matriculates, and 85,167 (7.1%) are above matriculates or in other categories. This data presents a gloomy picture of the nature of education in our primary schools as the quality of education always depends upon the professional competence, training and the academic equipment of the teachers.

How do we explain such a dismal state of affairs? One may like to advance number of reasons for it. The main fact, however, is that the teachers for primary schools come mainly from the lower social and economic strata of Indian society and in turn enjoy lower status and prestige. Even in terms of remuneration, service conditions, facilities for academic, professional and economic growth, the primary school teachers in our country are at a disadvantage. The majority of teachers in primary schools

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are living in such extreme poverty that it cramps their growth.

As a result of the above stated conditions only a small number of able young persons have been attracted to become primary school teachers. However, there is some indication that the position is now changing. There are several reasons for this. One is the phenomenal increase in the recruitment of teachers in primary schools. Secondly, many young persons do not go for university education due to poor economic condition. Thirdly, they find it relatively easy to get admission in a teacher training school. Fourthly, possibly they are advised to enter the teaching profession because of easy and early access to job. Hence, an ever increasing number of academically brighter young men and women with higher qualifications are now joining the teaching profession at the primary level. But these young persons do not find their jobs challenging enough for their abilities and aspirations. The result is that a good number of teachers at this stage are constantly looking for better jobs; and thereby cause a net loss to the teaching profession by joining elsewhere. The loss of teachers under training is tolerable to an extent, but a trained teacher leaving the teaching job is a matter inviting serious consideration from those concerned with teachers and teacher educators. It is believed that a substantial number of trained teachers who leave the profession are talented or intelligent people who find that their abilities are being wasted and also see no future prospects in the teaching career as such. Therefore, they seek alternative avenues. The other category that leaves the profession is of those who had no interest in teaching but were looking for a stop gap arrangement. But the talented teachers who remain in the profession and are recognised by their students start rotting soon for various reasons including the environmental and administrative.

Identification of the talented

The foregoing paragraphs would naturally incline one to think that in spite of the lower status of primary school teacher in terms of economic, social, professional and academic considerations, we do have a small fraction of teachers, whom we could call talented. This talent should not go unrecognised any more. Sincere efforts will have to be made to identify and retain them. Immediate steps should therefore be taken to provide opportunities for the fuller growth of their talent so that children benefit from their presence.

Before the problem of identification is taken up, it is worthwhile to reflect on the meaning of talent first. According to

the lexical meaning, a talent is a faculty any natural or special gift : special aptitude eminent ability short of genius persons of special ability . disposition" (Chambers, 1968). Although the word ' talent' may mean special aptitudes and abilities that characterize a distinct category of teachers; this paper is limited to those teachers who are superior in terms of academic aptitude. Talent may further be divided into 'talent potential' and 'talent performance or talent actual' "The problem of identification of potential and of actual talent are quite distinct. Despite the fact that the identification of potential talent is probably more interesting and valuable, certainly more dramatic and difficult... the study of actual talent is logically and strategically prior to the study of potential talent" (McClelland, 1958). This provides some hint for identifying the talented teachers at elementary school level so as to distinguish them from among the average teachers. This will provide them the recognition they need and will give them a sense of belonging. There is a need for some kind of provision for the fuller growth of their talent to enable them to foster the growth and the development of the future citizens of our country.

What to Identify

This is the most difficult problem under consideration. What are the specific aspects of the teacher and his work that could be taken up to reveal that such, and only such, teachers, are the talented ones. Prima facie, one would be inclined to say that an aptitude test, an achievement test, a study of his aspirations and attitudes and a study of his involvement in the day to day school activities including teaching the class, the methods he adopts to achieve academic and national goals etc will go a long way in determining the talent of good teachers. However, we have to attempt the issue concretely, not alone by conducting the aptitude or achievement tests, but also by carrying out a detailed job analysis of a teacher's work and then evaluating as to how the successful and talented teachers perform their jobs. This may also involve the question of evaluating them on what is expected of the teachers in different school situations. Some part of the work has already been attempted in the U.S.A. and elsewhere, on teacher effectiveness and characteristics, the results of which could be used in framing the criteria for identification of the talented teachers. Nevertheless, the situation demands that talented teachers must be identified with the use of sound scientific tools with high degree of discriminatory value. To start with, the talented teachers can be identified on the basis of triple screening

system. In the first stage, academically brighter teachers could be screened on the basis of their performance at the school leaving examination and the teacher training examination. The second stage will aim at identifying the intellectually superior persons with the help of a group verbal test of intelligence. Lastly, the the scores on an attitude scale could be used to locate those teachers who possess positive attitude towards children and the teaching job. Thus, the composite criteria of achievement, intelligence and attitude can be made use of in searching the talented teachers at the primary level.

The training strategy

Having once identified the talented teachers, special training programme will have to be devised to provide them opportunities for jobs in the higher professional cadres. Since these teachers have had courses in pedagogy and educational psychology considered adequate for efficient teaching, the special course for the talented should mainly aim at enhancing subject-matter knowledge. However, in the last year a professional course on advanced level may also be included in the programme. The full-time course should be at least of two years' duration. Universities will have to be approached to grant recognition and award graduate status to the successful candidates. Another alternative could be a condensed course spread over one year and two summers. It may be a full-time course or a part-time correspondence-cum-summer school scheme. The Regional Colleges of Education, run by the National Council of Educational Research and Training may devise such courses and run them on an experimental basis to start with. Recognition by the respective universities and also inter-university board will be a necessary precondition to run such courses.

The Outcome

A search for the talented among elementary school teachers in India will make a contribution. There are perhaps three distinct advantages of identifying and training the talented teachers. Firstly, the mere fact that the talented are recognised and distinguished from the larger teacher community will act as a morale booster for those who are identified, and help generate a sense of healthy competition in others. The training would open channels of professional advancement both in terms of competence and promotion. Their future will not remain as dark as at present. They are likely to be a more satisfying group of teachers. Secondly, proper utilization of

their talent will provide more satisfaction in their work. In turn the quality of their teaching is likely to be improved significantly. They may set examples for other teachers to emulate. Thirdly, the search for the talented and the provision of special facilities for professional growth will possibly provide a great incentive to the able and promising young persons to join the teaching profession at the primary school stage.

Suggested Health Programme for Primary Schools

S.K. SAINI*

Introduction

It HAS been rightly upheld by UNESCO that "health is both a pre-requisite for, and a goal of, formal education." But the term 'health' has been differently interpreted by different persons. Certainly, health means more than the absence of a disease. It means having a fit body, a sound mind and also the ability to get along with others so as to make living enjoyable. The best definition of health as given by W.H.O. is "Health is a state of complete physical, mental and social-wellbeing and not merely the absence of disease or infirmity."

Health is important, not unlike other age-groups, to students. It is difficult for a student to learn if he is tired, sleepy, hungry, angry or if he is in pain. Health is also important for the teachers. Teachers know what a hardship it is to try to teach with aching tooth, hurting back, a miserable cold or fever. At least those teachers who have tried to teach under any of these conditions recognise the difficulty. The student's health is important to the teacher's job as it is difficult to teach a student who is sick or in pain or who is undernourished. If the teacher has a communicable disease, it can be passed on to the students in his classroom. Health then is a basic consideration of education.

School Health Programme

The health aspect of the school programme is usually referred to as "the school health programme." The school health programme is said to include everything organised or

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carried out by the school that affects the health of the students. For instance, it is helping students learn new knowledge about their bodies and also how to make them strong; it is helping students how to get along with others in work and play; it is helping students learn that communicable diseases are caused by "germs"; it is helping students learn what to do to prevent or control diseases. These are only a few of the items included in the school health programme. There are several besides.

The various items in the school health programme are generally divided into following four areas :

- (i) Healthful environment.
- (ii) Health Education.
- (iii) Health Services
- (iv) School meals

Each area needs some elaboration for better understanding.

I. Healthful Environment

A good and healthy environment is an effective teaching aid in itself. Proper layout of garden, well-maintained lavatories, clean and airy rooms and other sanitary conditions in the environment teach the students some essential health and attitudes which they cannot easily learn from other sources.

There are many items in the environment, which have a bearing on the health of the students. The list includes :

- Safe water supply,
- Sanitary disposal of human waste,
- Handwashing facilities,
- Proper refuse disposal,
- Compost-pit arrangement,
- Lighting,
- Ventilation,
- Protection against heat, cold, dampness and other weather conditions,
- Bathing facilities,
- Safety aspects of facilities,
- Proper drainage.

Even more important than the physical environment is the emotional environment which prevails in the school. It has now been scientifically established that the major causes of diseases both mental and physical lie deep in the emotions of the individual. As such a better emotional environment is conducive to better mental and physical well-being. The responsibility of the teacher in this respect is very obvious.

He should maintain good inter-personal relationship with the members of the staff, students and their parents.

II. Health Education

Health education is that part of the school health programme for which the teacher has the major responsibility. The primary school's major responsibility is to promote sound instruction in health matters, as in other fields. Through health education the students will learn new health knowledge and develop sound health practices both personal and collective. Health teaching should be planned in relation to the students' growth and development, needs and interests. Health and health education may be taught as a special subject. This could be included under subjects like general science, home science, social studies, physical education, hygiene etc. Health projects may be included in science fairs.

There should also be proper arrangement for physical exercise, games, sports and other recreational activities under the guidance of a trained physical instructor. Practical experiences for students can be centered around day-to-day activities in the home, school and the community. Parents, teachers and the health personnel can provide students opportunities to learn and to do things in respect of health education.

III. Health Services

The third major area is health services itself. These may vary from school to school depending upon the facilities and personnel available. Some schools may have the services of a doctor, a nurse, or a nurse mid-wife, a sanitary inspector, a vaccinator and also the services of the specialists such as dental surgeon and an eye surgeon. Other schools may not have any of these personnel to help them. Nevertheless, every school can do something about the health of the students and can also help them get some help when they need it. Here, teachers can play a vital role by observing signs and symptoms which might indicate disease, illness or physical defects. They can arrange lectures by experts, maintain health records, refer students for a periodical medical check-up. In this regard priority must be given to those services which help in the control of communicable diseases; follow-up of school health records and health counselling in the schools. It is desirable to have arrangements of first-aid and emergency care in the school. Some provision for film shows/

slides and puppet shows and other A.V. Aids and Mass media should be there.

IV. School Meals or School Fooding

This activity is usually thought of as having a dual purpose. One is to provide training in school meal service. The second is to help students learn about the importance of food to their own health. It is intended to help them develop good diet habits. Sometimes schools serve meals for a third purpose i.e., to provide food for students who are malnourished. A well-fed child is better able to get benefit from his studies

Conclusion

From the above discussion it becomes obvious that education and health authorities share a common interest and responsibility toward health and health education of the students. The responsibility of the education department is all the more important in bringing this knowledge to the students from the very initial stage by including health education in one form or other in the existing curricula of primary schools. They may also organise refresher courses for the teachers in health education. It is suggested that this much-neglected aspect of education be given sufficient attention by higher authorities so as to keep children healthy as they are the destiny makers of India of tomorrow.

Evaluating Pupils at the Primary Stage

PRABHAKAR SINGH*

MORE PROBLEMS in primary education flow from the prevailing system of pupil assessment than is usually thought of. The source of stagnation, disappointingly low standards and the like are directly traceable to this source. The system has been under fire for quite some time now but the reforms undertaken have been surprisingly marginal. And all this is not easily explainable. Let us therefore consider briefly its history and the dilemmas before we come to the discussion of the programme itself which calls for bold steps and perspective planning.

Retrospect

The system originated in the evil practice of 'payment by results' in England, with its emphasis on external examination and classification, was later introduced in this country. The indigenous system knew no such divorce of teaching from testing, not even formal group assessment procedures. Like content of education the assessment policies also reflect the socio-political background of the land. The new organization of primary education under the colonial establishment was keen to ensure the mechanical efficiency of the acquisitions viz., the three R's as deemed desirable by it. The situation was no different in contemporary England in so far as the education of the lower classes was concerned. Things changed rather rapidly after the Industrial Revolution. But in India no such event of tremendous implications ever happened, with minor changes the system continues to this day.

Status

Briefly described, the common prevailing practice is to hold annual promotion tests beginning right with Class I onwards. This test is

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often administered by the school inspector or some one acting under his or her guidance as examiner. At the end of Class IV or V marking the completion of a stage or sub-stage, a more formal examination is held.

The Basic education movement brought in its wake new ideas but made a vain attempt to break the age-old stranglehold of external examinations. The critics argued that in the absence of a systematic assessment the product of Basic school would not compare favourably with the traditional ones. They were therefore advised to develop "efficient instruments of educational measurement—to discover the general and special abilities of their pupils and to diagnose their difficulties and incapacities", which others hardly did. In spite of such official desire which presupposes some effort nothing of consequence took place. A few enthusiasts here or there may occasionally use new type tests, or maintain progress report cards but there the changes terminate. The reasons for the failure therefore need a serious investigation. The hunch is that such advice is nothing more than an expression of admiration for an object glanced from a distance.

The Dilemma

The assessment of pupils at the primary stage is characterized by a variety of conflicts pervading almost all its aspects—motives, targets, programmes and procedures. There is the usual attitude of despair that the resources both in men and material are too slender to handle the task so stupendous, and that it is not even possible to locate where to begin even the little that could be done. At the secondary stage, the external examinations conducted by Boards at the secondary stage are said to have provided anchorage at the vacillating attitude. Then, there is the conflict of purposes. A sizeable section of knowledgeable people continue to believe in the necessity of an assessment system which helps (i) to maintain certain uniform standards, (ii) to provide a basis for the choice of courses at the secondary stage, and (iii) to create incentive for better teaching and learning. The Education Commission (1964-66) has disagreed with this viewpoint but this did not solve the problem, for the persons who hold this view are not likely to give in easily. The changed circumstances both political and technological demand that the penchant for conformity, limited curriculum etc. be given up in favour of a system which helps build an educational system suited for the training of a creative, broad-minded and responsible individual. Similarly, there is the cross-roads where one route leads towards new developments in the field of content and processes of human learning and the other towards the tradition-bound, imitative and almost *ad hoc* decisions. Though the traditionalist has also started

feeling that a change is called for but somehow he can not measure up to it. The time has come when all should join hands to bring about a change long since felt and cast aside their familiar viewpoints for the sake of a system that may match up with the national needs and future requirements.

Basic Considerations

Nearly half a century ago Aurobindo wrote that "the first problem in a national system of education is to give an education... without the evil of strain and cramming". The advice is all the more relevant now when future is being moulded in our schools. The examinations, test or promotion generate an anxiety at this impressionable age that sometimes hinders personality growth. At the primary stage it is not so much the content as the processes which occupy a pre-eminent place. Content at this stage primarily serves as the medium and not as an end in itself, unlike the higher stages of education. It is also true that processes cannot be tested properly at a point of time through a formal test. There is the additional difficulty of arriving at the artifacts of examination, the contrived situations in such a way that they are not repetitive because only a narrowly motivated child will find repetitive test situations interesting enough to concentrate. Therefore, any such testing proves both futile and invalid.

Since growth in childhood is too undifferentiated to isolate safely representative criteria, it is not proper to assess on the basis of the hypothesized ones. There is also relatively much individual variation at this stage in the pace of learning not only within a group but also in time sequence for the same individual. In such circumstances, the grade organization which is there more for assessment convenience than for an instructional requirement, can scarcely be defended. The Kothari Commission (1964-66) realized it and suggested a non-graded curricular organization for the first two years of primary education. There is, however, a strong case for extending this proposal to the whole primary stage with further prospects of its adoption at the middle stage. It has been widely observed and experimentally proved that repeaters do not find re-learning interesting and sink further giving rise to the "created" problem of stagnation in education. To resolve the dilemma of promotion or no promotion, it is always advisable to back the former.

The need of the assessment of pupils, however, cannot be minimized, for without the feedback of information about the state of learning no instructional programme can make any progress, especially at this stage of education; the child is too immature to take any material decisions on his own. Basically, all testing has to be diagnostic to find out the strengths and weaknesses of child's actual learning and afterwards the next step including the remedial work to stamp out

wrong learning has to be planned. The procedures employed and areas covered should be comprehensive enough to collect evidence from all sources. In other words assessment should become synonymous with the relatively newer concept of "evaluation". In the absence of grade organisation, argued earlier, progress will be evaluated from one unit of learning to that of another. The teacher can assure about the results himself by employing various techniques such as observation, mastery test etc. This leads to the problem of laying down standards in terms of curricular specifications. Needless to say that all testing has to be objective based. It may be worthwhile to remember that educational evaluation is an integral part of the curricular process itself.

Programme

There is no doubt that evaluation at the primary stage awaits a major policy-level breakthrough. The policy decisions in this respect, however, valid and practicable they might be, are likely to flounder for want of a properly designed programme. Among other things, the implementation plan should include the following basic steps:

- (A) *Formulation of curriculum specification*: Since norm-based criteria for evaluation have hardly any relevance at this stage, there is need for laying down curricular criteria or standards. It will require a cooperative work involving curricular framers, psychologists and working teachers.
- (B) *Teacher orientation*: This is a necessary corollary of the introduction of such a significant change. The orientation programme will include things like acquainting the teachers with measurement instruments and the interpretation of result etc.
- (C) *Development of materials*: The teacher should not be expected to possess technically sound evaluation materials, such as diagnostic tests, remedial measurements, rating scales and the like. It is enough if he uses them properly.
- (D) *Technical Service Centre*: The Education Commission (1964-66) has visualized such an arrangement in a slightly different form. It may, however, be agreed that teachers will need all kinds of help and guidance in implementing the above programme. It may also be necessary for the centre to carry out its own surveys of pupil attainment and feedback the information in general terms to the teacher, leaving the individual child undisturbed.

Evaluation Hardware

The hardware in the form of testing techniques and materials are many and varied. Some of the important ones for consideration for being used at the primary stage are as under :

- (a) Tests of basic abilities cognitive and psycho-motor
- (b) Tests of non-cognitive growth.
- (c) Tests of attainment in areas of formal education.
- (d) Informal teacher-made mastery tests
- (e) Diagnostic tests.
- (f) Observation schedules and checklists
- (g) Record and report proformas.

The first three types of tests can be handled by specialists from the Service Centre only. Relevant information should be supplied to the teacher. The danger of misuse and abuse of the hardware is to be guarded against, especially the risk of their becoming ends in themselves. Doubt is often expressed with regard to teacher willingness, trustworthiness and competence. The first two should be assumed and conditions be created for them. The last has to be developed through in-service and pre-service education. It should be a part of the strategy to proceed in a systematic manner and phase the programme appropriately. The existing school inspection staff may be harnessed to run the technical service centres. The materials can be developed without much difficulty since the required expertise is now readily available in the country.

Conclusion

The importance of a sound evaluation system at the primary stage is not often realized. It is a significant factor in transforming the entire outlook on primary education. The outputs are quite favourably commensurate with the inputs. It is now merely a question of fixing priorities and mobilising the resources. Let us hope it is done expeditiously.

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Improving the Quality of Primary Education

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THE LAST two decades have witnessed an unprecedented expansionary phase in primary education. The obligation contained in Article 45 of the constitution provided the motivation for this spurt of activity. Although a long way has still to be covered in fulfilling the constitutional obligations, the pendulum seems to have swung from quantity to quality of education. The experience of the last two decades is indicative of two major propositions. The first is that mere quantitative expansion of primary education in the absence of the improvement of its quality cannot be carried too far. The second is that mere provision of more schools and enrolment of children cannot be considered sufficient for the fulfilment of the constitutional obligation at least in its spirit. Virtually the excitement for enrolment of children in the schools cannot be generated unless the parents feel satisfied with the intrinsic value of the educational programmes offered by the schools. We have thus reached a stage where the improvement of the quality of education has to be provided an overriding priority on other programmes.

Improvement of the quality of education seems to be a simpler term of use. In operational terms, however, it presents a multi-pronged problem. The quality of education is a matter of perception. The perspectives for perception differ from community to community and person to person. The problem in this context arises at the point of determining the direction of change. Involved here are questions of what do we want to achieve and why do we want to achieve it? Secondly, qualitative improvement in education is a new dimension of work of which developing countries have no previous experience. In these new strides there is always an inherent danger of our committing errors. Unfortunately, education is an industry which has no powers of transforming or with-holding the product, once it has been moulded. This makes it necessary to prepare the mould with great care. Involved here are questions of selecting a proper model whether local or from

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some other country to suit our conditions. Thirdly, improvement, implies change and change by its very nature generates resistance. As a consequence distortions in the different aspects of emphasis and approach in programmes are common-place occurrences. Other questions concern adjustability and adaptability of programmes for retention of the spirit behind them. Lastly, the improvement of the quality of education implies improvement of the inputs in education. Single-track approaches and short-cuts are difficult to find in this domain. Involved here are also questions of balancing the different streams of change and mixing them in proper proportions. It would thus be apparent that the improvement of the quality of education is not as simple an affair as is the expansion of numbers.

We are on the threshold of the seventies. In the mid-sixties a thrust in the direction of improvement of the quality of primary education was made. This thrust is likely to gain momentum and the keynote in the seventies is certainly going to be the improvement of the quality of education. It is high time we planned properly the change that we desire to come.

In the determination of the direction, depth and the process of change, the first requirement is that of developing comprehensive designs of change. Primary education in the country is presenting a scene of great confusion today. In the fifties, primary education was guided by the vision of Mahatma Gandhi and the scheme of Basic education provided the angle of perception. The sixties saw a whittling down of this vision without being replaced by any model which could be as comprehensive in outlook or approach. Our efforts were mostly directed towards the promotion of various programmes in the name of primary education without even establishing a harmony between the different programmes. The justification for programmes were sought and accepted from their derivations in the programmes of the advanced countries. Today each new dimension finds its inroads on the programmes of primary education under the explicit thinking that primary education has ultimately to prepare the base for all further learning. The emphasis on work-experience, social studies, population education and national integration are examples of this shift of emphasis. Bruner's logic of the possibility of teaching anything to a child at any stage of development in some intelligible form, has provided the justification for these changes. The other aspect of the logic that only that which is considered desirable from the point of view of the society and the individual should be taught at different stages of education has not been paid due attention. Consequently, primary education has been deprived of its necessary vision of the goal.

In the face of all these developments we cling to the urgency of

providing compulsory primary education to all. It is evident that the Nation aspires to provide a minimum preparation to all its 'would be' citizens through this programme. Primary education is a distinct stage of education and the focus of attention at this stage has to be on this vision of the minimum preparation for all. All the demands imposed on primary education from considerations other than this are patently unjustified and we have to cry a halt to these inroads on the programmes of primary education. Again what constitutes this minimum preparation is not a matter to be decided by one or a few individuals or institutions or which can be settled once for all. This requires a continuous dialogue between the States and national level agencies, engaged in the formulation of educational programmes. Unfortunately, in this domain again, a continuous dialogue has never come to exist. At best there have been series of monologues with each agency trying to sell its wares. The development of curriculum in different states represents this trend. We have the state and national level agencies in this field and yet experimentation on alternative models holding equal amount of promise has not been tried with a view to finding the optimum combination of outcomes. We have not even proceeded with the development of alternative models. It appears that unless we move with the suggestion of John. I. Goodland and decide the vital islands of agreement in curriculum, it would be difficult for us to open the dialogue on formulating better curricula which will provide the base for the improvement of the quality of education. Keeping those island of agreement intact, different agencies working in the field of curriculum development have to develop alternative programmes with clearer substitution propositions. This alone can help us in taking a balanced view of alternative suggestions in this field. Institutions engaged in this task both at the national and the state level will have to come close in the seventies to succeed in the formulation of proper programmes with specific visions of the directions of change.

Another difficult problem in this field is presented by the poor quality of the apparatus of change. One of the important factors of change is the teacher. It is common knowledge that the expansionary phase in primary education brought in its train a large number of ill-prepared and inadequately prepared teachers to staff our primary schools. The prospects of improving the lot of the teachers do not seem very bright. Long strides have been taken in the sixties to provide in-service education to the teachers, yet the results are not very encouraging. Very often the blame is put on an attitude of indifference on the part of the teachers. The argument is not completely unfounded, yet it appears that it is slightly misplaced. Programmes of in-service education for

teachers mostly suffer from two major defects. The first is that they are loaded with more of theoretical verbalisation which does not necessarily provide the participants any idea of the solution of problems that they have to face. As a consequence the teachers remain indifferent to these courses. The other difficulty is that in-service education programmes for teachers lack continuity of approach. Isolated programmes dealing with different aspects of the programmes do not necessarily succeed in encouraging teachers to deal with the problems in the classrooms in a comprehensive way. Here mostly the problem of large numbers and inadequate finances hamper the progress. The fundamental problem, however, is neither insufficiency of programmes nor inadequacy of preparation in their conduct. A more deep-rooted issue of preparation is that the process of education has remained mostly stagnant over the last few decades despite spectacular progress being made in the field of technology. We still place a high premium on human ingenuity and effort in improving the quality of education. One of the notable reasons for the unsuccessful implementation of the scheme of Basic education is that it placed too much reliance on the competence and capacity of teachers to devise their own teaching materials and the programme of education for their classes. Obviously such teachers cannot be mass produced nor can all be trained in this art. A lesson that we have to derive from this experience is that educational process has to be developed more as a technology with lesser reliance on the talent of the teachers. The use of programmed learning techniques, audio-visual aids and teaching machines open wide possibilities of vitalising teaching in the class rooms without putting too-much reliance on the talent of teachers. Such developments in remoulding the process of education seem to be the best course of improving both our in-service and pre-service education programmes for teachers. This aspect of the problem will have to be tackled in the seventies if the quality of education has to be improved.

The third aspect of immediate concern in this respect is the control and financing of education. Inadequacy of finances is often ascribed to be the main cause hindering the progress of primary education. This is true only to a certain extent. Improvement of the quality of education is not so much dependent on the availability of more finances. The greatest need in this context is that of flexibility of outlook on the part of administrators. Rigidity and authoritarianism has to give way to the development of a dynamic outlook. Determination of proper priorities in programmes can bring about a lot of change. Economy in the use of limited resources has to be the keynote in the seventies and the human talent in the supervisory staff has to be properly harnessed, developed and exploited to provide the necessary help, encouragement and guidance to the working teachers on the

one hand and the institutions working for them on the other. The State Institutes of Education have to be brought on sound footing through a regular supply of suitably qualified staff and adequate resources to meet the heavy responsibilities put on their young shoulders in the task of improving the quality of primary education. Virtually the State Departments of Education are the key agencies to transform the system of primary education and much depends on how they act.

The task of improving the quality of education at the primary stage is thus a difficult one. Only a concerted, well-directed and coordinated effort on the part of vital agencies of change can help the cause. There is no road to guide us and no signposts to show us the level of success and yet, we have to move onward. Let us hope we will be able to meet the challenge of the seventies.

Towards Improving Reading Abilities, Habits and Tastes of Children

D.S. RAWAT*

1. Introduction

READING WHICH is one of the most important aspects of the language arts is of great significance in the educative process of the child. Apart from formal teaching it is the only source of learning new knowledge. For a young child it is an extension of his nascent language abilities. In other words reading illumines, as it were, the child's experiences.

The reading ability and habit have both individual and social significance. If a child can learn to read skilfully and competently, he is assisted in his personal growth. This skill enables him to do well in his studies, as also in all other walks of life. As regards the social significance of reading we expect that those children who can read well contribute materially to the well-being of the community. The child, frequently gets his impressions from books, newspapers, magazines, conversations, radio, television, etc. If he is not a mature reader he may not be able to discriminate between a fact and an opinion which is very necessary for making judgements in a democracy. In fact, a certain level of reading ability among the citizenry is essential to the working of democracy. Not only this but when children learn to read better they are able to understand more about the events and problems which all groups of people must face in the modern world. Thus reading makes us not only useful citizens but effective members of the world as such.

It is common knowledge that if children fail to make satisfactory progress in reading their personality development is adversely affected. Experience tells us that a poor reader is almost certain to repeat grades and successive failure on the part of the child results in frustration and compels him to leave school.

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In the post-Sputnik era the extent and depth of knowledge content is changing very fast. As such there is a need for a greater amount and a wider variety of reading. The skillful teaching of reading both as a subject of instruction and a tool employed in studying a given subject matter needs to be emphasized at all levels of education and more particularly in the primary grades. We have to strike a balance between '*Learning to Read*' and '*Reading to Learn*'. One appears to be complementary to the other.

Looking at the importance of reading, one may ask what is the general level of the reading ability of our children and adults and what are their reading habits. Perhaps we have no answers to these questions based on any empirical evidence. There is an urgent need to conduct such studies in our country. Such studies have, however, been conducted in other countries. For example, we know that book reading and general literacy is higher in Great Britain and the Scandinavian countries. It has been found in the U.S.A. that by and large the reading ability of American adult population lies approximately between ninth and tenth grade levels although there are large individual variations.

In spite of the fact that India has about 10,019 dailies and periodicals their average circulation is barely 45 per thousand population. The number of newspapers per lakh of population is roughly two. Considering India's population their average circulation and availability can hardly compare with any advanced country. For example in U.S.A. there are 11,200 dailies and weeklies and thirteen of those enjoy a circulation of over three millions. The reasons for this poor performance in India are the low rate of literacy which is about 30 percent and non-availability of good reading material, hence poor reading habits. This is more true for children regarding whom very little attention has been paid thus far. Whereas in the advanced countries e.g., U.S.A. about 85 percent of the youngest children read some parts of the newspapers and other available reading material, it is regrettably not true for India.

Our country is slowly entering the age of television. Some people are afraid that radio and television would affect the reading habits. To some extent it may be true but studies have also shown that movies, radio and television do not have such adverse effects. For example, in a study of children in grades four to twelve in Ann Arbor, Michigan, Battin found that about one third of the group believed television had not influenced their reading. About 20 per cent said they read more books and magazines and less than 15 per cent said they read less than before. Our country will do good if the radio and television programmes are developed not only to impart information and work as a source of entertainment but to stimulate and moti-

vate children to improve their reading abilities, tastes and habits.

2. What is Reading?

Reading is a meaningful experience having a bearing on the thinking process. It is far more than mere skill, for it involves several skills. No teacher would like that his pupils should read the printed matter without understanding its meaning.

Broadly speaking there are three constituents of reading :

- (a) Quick and accurate recognition of the printed symbol.
- (b) An adequate understanding of author's meaning, and
- (c) Use of the attained understanding e.g. to apply, to interpret, to appreciate or to evaluate what is being read.

In a reading act all the above three things are important

3. What to Read

What the children ought to read is a very ticklish issue. If reading is taken as a process of communication then we must give freedom to children to read. Of course, we may not allow the children to read every thing, still there is a psychological danger to ask them: 'Don't Read this'. The role of the parents and teachers should be to develop such taste and interest among the children, that they select only the worthwhile material to read.

Another important determining factor for what the child should read is what type of magazines, books, periodicals, etc., are purchased by the parents for home. It is no use telling children "Don't read this magazine, this is only for adults". In that case he will certainly read it. It may be good if only such reading material is kept in home and the school library which is worthwhile reading.

The material available in the school should be kept in a graded form according to the interest of children of different age groups. There should be some material which each child of a particular age-group **MUST READ**. Then there should be some material for that age-group which children **CAN READ**. Lastly, there should be some material children **MAY READ**.

Some research studies have already been conducted in our country to determine the reading interests of high school pupils (boys and girls) in the different languages like Hindi, Bengali, Marathi, Kannada, Gujarati, Punjabi etc., very few studies have been focused on the lower age-groups. Some salient conclusions that emerge from these studies are as follows :

- (a) There is a dearth of interesting books for children at different age and grade levels.
- (b) Girls at the high school stage read more extensively and ser-

iously than boys. They like to read detective, historical, patriotic, adventurous, scientific, social and biographical stories.

- (c) Children's reading is related to their socio-economic conditions, their reading opportunities and their temperament.
- (d) The first reading preferences of boys at high school stage is stories, the second, novels, and the third, poetry. They show very little interest in essay or serious literature.
- (e) The teacher's guidance in selecting the right type of book is lacking.

There seems to be a great need to develop a team of writers and publishers for producing suitable childrens' literature which may be based on the childrens' reading interests. There is a dearth of such juvenile literature. But whatever little we have, for this there is a dearth of READER.

4. An Approach to the Teaching of Reading

There is a need to make efforts to improve the reading abilities and habits of our children. Some suggestions are given below.

Before children start reading, it should be ascertained that they are **READY TO READ**. Several factors determine the child's readiness to read. Some of the most important that have so far been identified are age, intelligence, sex, visual and auditory perception, physical fitness, left to right orientation, background experience and language facility, personal and social adjustment and interest.

It has already been established through research studies that more than 25 per cent who enter Class I are not ready to read. It has also been found that generally speaking a child who attains a **MENTAL AGE** of six years is ready to begin reading.

A child who is found deficient in any one of the aspects of readiness, should be given a remedial programme to make up his deficiency.

Children will continue to read increasingly and with interest so long reading provides satisfaction and gives them answers to their problems. Reading needs to be taught in such a way that children realise that books have a great part to play in their lives. In such cases only the mechanics of reading will not be enough. Whatever method of teaching reading is used the key-note should be to sharpen the thinking process of the child and enable him to discover that books contain words of valuable information and works of imagination. Such an approach would demand many things; for instance,

- (a) An increasing variety of good books, magazines and periodicals will be needed. We need such material for our five lakhs of primary schools. A beginning can be made by

providing at least two sets each of one hundred different types of books and magazines to each primary school library. Assuming the cost of each book as one Rupee we may have to spend Rupees two hundred for each of the five lakh schools. The cost will be cheaper when there is mass production of children's literature. We may also consider the possibility of introducing mobile library for children in each block of the country. This will also encourage the writers and publishers to take interest in the field of children's literature. Large scale competitions may be held for producing suitable literature for children in the different regional languages. This will motivate writers and publishers.

- (b) In reading lessons the teacher will have to put more emphasis on the judgement, evaluation, interpretation and appreciation aspect. For example, after teaching the story *THE CROW AND THE FOX*, the teacher will ask fewer questions like, "*What was there in the mouth of the Crow ?*", and more questions like "*Why did the fox ask the crow to sing a song ?*" or "*What would you have done if you had been the fox ?*" etc.
- (c) The reading programme may be oriented towards producing creative readers.
- (d) The reading programme should not only be related to language but to all content fields.
- (e) The library centered approach of teachers will be a long way to improve the reading habits and abilities of children.
- (f) The context-clue approach may be found helpful in developing the reading skills and abilities of children.

Reading programmes should be such which should develop proper taste and interests for reading. Some programme like *Reading Stories to the Class*, *Display of Book Jackets and Advertisements*, *Book Club*, *Exhibitions*, *Library Diary System*, *Free Reading Period*, *Supervised Study Period*, etc. may be found helpful for this purpose.

Due emphasis should be given to develop the speed of reading comprehension of children. For developing the speed of reading comprehension familiar works may be used in the early stages. Gradually difficult material may be introduced. The children should be explained in what situations skimming can be properly used. They should be given proper orientation in the left to right movement of the eyes. Adequate effort may be made to develop their vocabulary gradually. The child needs to be properly motivated for fast reading. The children should understand the purpose of reading the unit of a material. The speed of reading of the child may be continuously tested in order to help him to improve

the same. Some suitable projects may be conducted in the primary schools to evolve suitable techniques for developing the speed of reading comprehension of children in different regional languages.

Most of our teachers are not familiar with the new approaches to the teaching of reading.

- (a) The national organisations like the NCERT, Language Institutions, State Institutes of Education etc should produce literature for teachers in this field from time to time
- (b) Radio talks may be arranged for orienting the teachers to new approaches in the teaching of reading and improving the reading habits and abilities of children.
- (c) An 'Indian Reading Association' may be started on a voluntary basis to promote and implement the ideas for improving the reading abilities, habits and tastes of children.
- (d) Reading may be introduced in the syllabus of junior Training Institutions.

In order to feed the teachers with innovations and new ideas it is desirable to conduct suitable research studies in the field of reading. It is high time what we have a movement in reading in our country right from the primary school level. Let us pool all our resources to decide how to start this movement.

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Language Teaching and Learning at Primary Stage in India

DR. M.G. CHATURVEDI*

INDIA is a multilingual nation, with languages belonging to four language families of the world viz. Austrie, Sino-Tibetan, Dravidian and the Indo-Aryan. Although the census of India (1961) lists no less than 1652 mother-tongues spoken in country, the 15 languages in the VIII Schedule of the Constitution are spoken by 87 per cent of the entire population and their speakers are found in all parts of the country. That is why in spite of the great multiplicity of linguistic forms in India only a few languages have been cultivated and are taught and learnt at present. Because, only those languages are usually taught which have, at least, some readable literature in them, if not a great tradition of creative and scientific literature and are also used in wider areas of administration, commerce and education. Such languages are however very few which are spoken by substantial number of people and also possess educational literature in them.

During the last one thousand years or so, a number of modern Indian languages have been developed for literary purposes in the different parts of the country, but most of them were generally neglected due to the dominant position of Sanskrit, Arabic, Persian and English. One can appreciate the reason for their not finding a place in the obtaining educational system. When the Britishers came to India, they first re-organised the traditional system of education in two distinct stages i.e. elementary and higher. At the elementary stage, modern Indian languages were not only taught but were the media of instruction; at higher stage, it was only classical languages like Sanskrit, Arabic and Persian that found a place of honour. Later on the policy with regard to education underwent a transformation and English assumed an important position. Before independence, therefore, English was the first language and modern Indian languages were speeches of secondary importance, more vernaculars! Prior

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to English, this honour was accorded to Persian in Muslim times and Sanskrit in the pre-muslim days. Therefore, the growth of modern Indian languages in the field of education has generally been retarded.

It was only in the beginning of the present century that the need for introducing compulsory primary education through the mother tongue was strongly felt and the adoption of regional languages as languages of official administration was demanded by the nationalist leaders. When Mahatma Gandhi started his movement of Basic education, teaching of and through modern Indian languages was adopted universally and after Independence it is mostly the modern Indian languages, which are taught at primary stage compulsorily and are used as the media of instruction except in metropolitan towns where English continues to be used in some cases.

Although on principle, it is said, that at primary stage only one language i.e. the mother tongue is to be taught compulsorily and the same is to be used as the media of instruction, but in reality it is neither possible nor desirable. Because, first of all, the number of mother tongues spoken in India is very large, and secondly, all the mother tongues are not cultivated literary languages. Therefore, all the 1652, mother tongues as reported in the Census can neither be taught nor be made the media of instruction. In fact, what we are teaching at present, as mother tongue is either one of the 15 languages specified in the VIII Schedule of the Constitution or the one accepted in school curricula because of some socio-cultural reasons. The languages thus accepted in school curriculum at the primary stage, represent all the four language families i.e. Austric, Sino-Tibetan, Dravidian and Indo-Aryan and can be categorised basically into two groups; one, cultivated literary languages and two, uncultivated non-literary languages. The cultivated literary languages are usually those that are spoken by a large number of people and have sufficient educational literature in them. Most of these languages have been accepted as the state-official languages and have been specified in the VIII Schedule of the Constitution. It may also be noted that most of these languages are not only taught from the beginning they are also the media of instruction up to university stage. Languages belonging to this category are listed below :

- | | |
|--------------|----------------|
| (1) Hindi | (7) Telugu |
| (2) Urdu | (8) Kannada |
| (3) Bengali | (9) Punjabi |
| (4) Marathi | (10) Malayalam |
| (5) Gujarati | (11) Oriya |
| (6) Tamil | (12) Assamese. |

Besides, there are a few languages which though cultivated are

neither state-official languages, nor the media of instruction at the university stage, but are taught and learnt at primary and secondary stage by a comparatively large number of children .

- (1) Nepali
- (2) Sindhi
- (3) Kashmiri
- (4) Dogri
- (5) Konkani

It may interest some to note that most of these languages listed so far belong to the Indo-Aryan family while Tamil, Telegu, Kannada and Malayalam belong to the Dravidian family. There are, however, languages that belong to Austrie and Sino-Tibetan families, and which though largely uncultivated are taught at the primary stage. In the absence of developed scripts their teaching ends mostly at III or V standard and children are afterwards initiated to some other regional language. These are .

- | | |
|--------------|---------------|
| (1) Santhali | (7) Ao |
| (2) Tibetan | (8) Angami |
| (3) Mithnee | (9) Mizo |
| (4) Khasi | (10) Garo |
| (5) Boro | (11) Laddakhi |
| (6) Lushai | |

Obviously then all the languages taught at the primary stage are not the actual mother tongues of the children though they may sometime be termed as such. Linguistically speaking, the children who come to schools to learn any one of these languages as their mother tongue usually speak either some other form of these languages, or some other form of their dialect. Therefore, teaching of any language as mother tongue will have sets of problems and issues as are the groups of learners differing in their actual speech habits. It is, therefore, necessary that a distinction is made between the standard form of a language to be taught alongwith its sub-standard forms on the one hand and the standard form of a language together with its various dialects or cognate forms on the other.

The linguistic problem of language instruction at the primary stage are usually not appreciated by educationists. It is fairly surprising to find that language instruction is relatively a neglected area of instruction despite its unique role in the total instructional programme in particular and life in general. It has not received the attention of the educational supervisors, administrators and research workers that it deserved.

One of the reasons of this state of affairs has its roots in the educational history of the West. At the time when the foundation of the western educational system was being laid in India, though the

European classical languages had already lost much of their old glory and importance, they had left their indelible mark on the instruction of modern languages. Further, there raged a fierce controversy about their teaching. This was reflected in the thinking of early educationists in this country also.

Be that as it may, it is the primary duty of the educationist to take note of this situation and to so plan the educational system that the demand of learning more languages by more people for a variety of objectives is met effectively in relatively less time. But as the language teaching and learning in itself is a very complex affair involving numerous agencies, institutions, persons, material—both linguistic and otherwise, and also the concepts—the content of language instruction, the educationist alone cannot do much in their improvement. In language instruction content and method are so inextricably interwoven that what is usually said to be a single subject is, in fact, a combination of several distinct skills e.g. listening, speaking, reading and writing. Further, these skills themselves possess dimensions which are baffling. An integrated scientific approach, based upon the related disciplines such as linguistics, psychology, sociology etc., must be evolved to solve these problems for the betterment of education in general. Indeed, the teaching and learning of a language is a field of interdisciplinary activities in which language teachers, linguists, psychologists, statisticians, and educationists will have to work in close collaboration. When these experts meet and work together the problems of language teaching and learning at the primary stage can be solved and pedagogically usable material for both teaching and testing can be developed. This also calls for the application of modern mechanical and technological devices for achieving better results than has been true heretofore.

The Ungraded Lower Primary School

DR. D.V. CHICKERIANE*

THE UNGRADING of grades I and II has been suggested by the Education Commission (1964-66) as a remedy to overcome stagnation at the lower primary stage of education. Stagnation is the result of failure in the school annual examination and consequent detention in the same class for one more year. Children in rural areas who stagnate generally leave the school. Stagnation is, therefore, one of the main causes of wastage. Wastage could be reduced if stagnation could be prevented and stagnation could be prevented by ungrading the lower stage of primary education. The Education Commission has recommended that in the first instance grades I and II should be ungraded and where possible, grades I to IV, covering the lower primary stage of education, should be ungraded. By having recourse to ungrading the annual promotional examination from one grade to another will be eliminated and students will progress in the ungraded unit at their own pace. Since there will be no annual promotional examination, there will be no detentions and no stagnation arising therefrom. No details of ungrading have been given in the report. But it can be seen from the references to ungrading, the Commission envisages in the ungraded unit the elimination of the annual examination, while other items as the syllabus or organizational arrangement will remain identical with the graded pattern.

Attempts at ungrading the elementary stage of education have been done outside India. Here the objective is not the reduction of wastage or stagnation. Rather the scheme is aimed at enabling the children in the school to achieve to their best ability. An account of ungrading a primary school of grades I-VIII with a total enrolment of 50 students in a mountainous school district in Mexico has been published. The nongraded school has been defined as a school which provides for the continuous, upward progression of all pupils from the slowest to the

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most able. This experiment was conducted to achieve the following objectives .

- (i) to ensure that each student masters the necessary basic skills and essential subject matter,
- (ii) to develop individual responsibility for independent study and progress,
- (iii) to encourage satisfaction in learning, and
- (iv) to encourage each student to develop his own particular talents to the maximum.

We can try to understand the philosophy behind the ungrading of classes. Education is a process in child's growth. In the school certain compartments have been developed for the educational growth of the child. In a given year the growth is restricted to the syllabus content prescribed for the year. In the physical world growth is not restricted in this artificial way. A child may grow rapidly in a year, but very slowly in another year. For instance, he may grow two inches in a year, while in another year he may grow five or six inches. Growth is a continuous process varying with children. It would be unwise and impracticable to restrict growth to a given dimension to all pupils in the same year. One may grow two inches, while another may grow three or four inches. Growth as applicable to physical world also applies to education. A child may grow rapidly in a given year and go beyond the limits fixed for that year, while another child may not reach the target fixed for the year. It would be unwise to prevent the former from being beyond the limit, while penalising the latter for his inability to cope with the standards laid down in the curriculum for the year. The graded system introduces this unnatural position. It assumes that learning in all fields should proceed at a uniform rate. It ignores the fact that a child who has advanced in one field of learning may be retarded in another. We know that there are wide differences between the abilities of children. Sometimes such differences get accelerated due to circumstances or environment. We cannot escape from these differences. The ungraded school finds a way out for these differences. It has been pointed out by Goodland and Anderson in their book "*The Non-Graded Elementary School*"—

"The non-graded school is designed to implement a theory of continuous pupil progress; since the differences among children are great and since these differences cannot be substantially modified, school structure must facilitate the continuous educational progress of each pupil. Some pupils will, therefore, require a larger period of time than others for achieving certain learnings and attaining developmental levels".

The philosophy of the ungraded unit can, therefore, be summed up by

stating that since we cannot modify the wide differences among children, we should modify the school structure to accommodate these wide differences.

Coming to the practical side, it will be seen that the ungraded pattern is essentially a change in the organization of work. The curriculum will be re-organised into a series of self-study units on a longitudinal basis. This longitudinal arrangement will not be broken by grade packaging. It will correspond to the longitudinal development of a child giving him freedom to move on the scale of the self-study assignments at his own pace. Guidance necessary for upward progression of the child would be available to him from his class-fellows who have progressed on the scale and from the teacher. Thus the non-graded school organisation will be built upon the following two factors.

- (i) A graded scale of self-study assignments, and
- (ii) A grouping pattern in which cooperative learning among the pupils would be possible, the older children helping the youngsters.

One great achievement of the non-graded pattern would be the reduction of anxieties and tensions to which young children are subjected by the annual promotions and detentions. In the ungraded pattern there would be no child who has failed or who is labelled as detained or repeating. It is true that some children will be slow-goers, but for that they need not be labelled as failures. Even where grade systems are maintained it would be a great advantage when the children are automatically sent up from one grade to the next one as a matter of course, regardless of their achievements. The following has been pointed out about promotions in elementary schools in Japan :

"Though the children undergo periodic tests, they almost invariably are promoted each year and so stay with the same group of school mates, with whom they form friendships that endure through life. Teachers in lower and middle schools almost never inflict on a child the shame of failure which would be reflected on the child's family and *buraku*; so the slow children pass through the school at the same rate as the bright ones."

From the point of wastage also such automatic promotions would be positive in preventing wastage, because a child who is detained leaves the school and forgets what he learns, but one who continues will pick up later on. Wastage would thus be prevented even if the child is allowed to proceed to the next higher class regardless of his failure in the promotional examination.

There are two ways in which the ungraded pattern can be introduced in our schools. One way would be to start with the lowest grade and allow the children to progress on the self-study assignment scale at their own pace. This batch of children would form the ungraded unit.

The other children in the school would conform to the graded pattern of work. The other way would be to convert the whole school into an ungraded unit all at once so that all grades together will form the ungraded unit. Each plan has its own advantages and disadvantages. The former procedure would take a longer time to eliminate the grade idea and also would build up an awkward situation in which the lower grades are ungraded while the higher grades retain the grade pattern. However, for smaller schools, as single-teacher schools, the latter pattern would be more advantageous, as it would be possible to form longitudinal groups for cooperative learning. Whatever pattern is adopted a system of unit by unit recording and evaluation after each assignment would become necessary to enable the child to appreciate how he is advancing on the scale of assignments.

Both patterns described in the previous para are being tried out in different areas in India and as the pilot projects make headway, they would yield valuable information on the advantages of the non-graded pattern at the elementary stage of education.

Two-Hour Rural School

K. S. ACHARLU*

OUR REPUBLIC emphasizes that social justice is the foundation of a healthy democracy. Our Constitution demands that we create a society in which people have equal opportunities for getting rid of poverty, disease, hunger and ignorance. Article 45 of the Constitution requires that the State should strive to provide free and compulsory education for all children upto the age of 14 years and that this should be achieved before 1960. But in spite of the efforts and 'drives' of State departments of education the constitutional directives have remained unfulfilled.

The Kothari Education Commission believes that the provision of free and universal education for every child is an educational objective of the highest priority not only on grounds of social justice and democracy, but also for raising the competence of the average worker and for increasing national productivity. (7.08).

Our educational system today both in its objectives and in its programmes falls short of meeting the needs of social justice guaranteed by the constitution. Whatever be our professions, our concern till today has mainly been the welfare and economic and educational betterment of the middle and upper class strata of society. Unfortunately, all attention has thus far been concentrated on the educational progress and advancement of the metropolitan areas, towns and the big villages, but scant attention has been paid to those places where the low-income groups live. Education for these unfortunates is but a distant goal. The few children that are drawn to schools from such homes are either withdrawn after a short period of schooling or have to stagnate.

The Kothari Education Commission draws country's attention to two significant aspects of the problem. the first is that of reduction of wastage and stagnation. The second is that of providing such foundational education as would help children to grow into useful and res-

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possible citizens of the country.

There are many causes for this difficult problem. But the most disturbing one is the economic condition of lakhs of low-income group families for whom the children of school-going age are indispensable for earning—sustenance. They feel that at least six to seven hours of precious time is lost to the family. The parents neither bear expenses for continuous schooling, nor can they ignore the meagre income derived from their employment.

Many other reasons have been stated to account for this state of affairs, but the chief one seems to us to be the absence among the poorer classes of a feeling of genuine participation in the educational programme, owing to the realisation that the schooling that the children receive is not in consonance with their life's needs, and does not make them participators in their life's vocation or purpose. The real challenge for us educationists is, to provide the millions of the low-income group in the rural regions the kind of education that will help them and their parents to lead more economically secure lives, learn better and more efficient skills, habits, and knowledge to make their lives better and help them play a significant part in the shaping of their society.

The Education Commission realizing the dull character of most of the schools and their poor capacity to attract and retain students suggested qualitative improvement of education, which ordinarily implies improved classroom teaching, providing teaching aids, better physical facilities, effective evaluation procedures, extra-curricular activities and so on. But all these programmes, though useful, do not touch the core of the problem. What is needed is a revolution in the educational objectives to create the necessary climate for people participation. The ends of social justice can be met only by an educational programme whose economic and social objectives are in consonance with the traditional values and skills and the life pattern of the rural masses so as to make their lives healthier, happier and more meaningful.

One of the suggestions offered by the Education Commission for a solution of the problem is part-time education for the stagnants, to be conducted by primary school teachers outside regular school hours, utilising the equipment and buildings of the same school, without rigidity in matters of time and the time-table, adjusting to local conditions so that school work should not interfere with that of home. The curriculum suggested for these part-time schools is not an abridgement of it. Both these suggestions do not appear to go to the roots of the problem.

Therefore a scheme of part-time education in small villages consistent with the demands of social justice and the conditions of Indian rural life is being suggested.

(1) Preliminary Work

Before the project is undertaken, an observational economic-cum-educational survey of the village should be made with a view to collecting data on the number of children of school-going age, the economic status of the parent, how the children are engaged, the time and place of employment, the occupational pattern in the village with seasonal variations, etc.

(2) Analysis of the data

The data has to be studied for the occupational employment pattern of the village, and children grouped according to their leisure hours, nearness to place of instruction, levels of ability.

(3) Curriculum

By the very nature of the varied conditions from region to region, no package curriculum can be useful. The general lines of curriculum construction may be as follows :

- (a) Cleanliness and sanitation should get top priority. The children must first be taught to clean their teeth, eyes, nose, comb their hair properly, rub their body in clean water and at least once a week wash the few pieces of clothing that they wear. The teacher's kit should invariably contain tooth-powder, washing soap, soapnut powder, mirror, combs, and oil and a few napkins and pieces of cloth.
- (b) *The safai of the place of instruction* : The area must be swept with fine clay as people do at home. Children should be taught the proper use of urinals and latrines.
- (c) *Prayer* : It is to be conducted in a clean place in a prayerful attitude, the teacher helping children to recite hymns and bhajans meaningfully and musically.
- (d) Story telling from the epics and Indian history in addition to myths and legends of the local region.
- (e) *Observation and study of the natural environment* : Simple talks based on the observations of the uplands and lowlands, rocks and soils, vegetation and animal life, the rising and setting sun, winds, cloud, rain etc., life of people in distant environments.
- (f) *Reading* : The first lessons in reading should be after a long period of conversational practice. The formal lessons will consist of specially prepared wall charts employing the vocabulary of the region. Writing should come at a later stage. A few good poems should be taught orally. It is a sound proposition to

encourage children to learn by heart a few good pieces of literature. The printed book should be introduced in due course.

- (g) *Number* : In the earlier classes the sense of number should be taught through practical experience and observation of the life of the region. In the advanced group both oral and written work may be attempted. The sums taught should be from real life situations in the region.
- (h) *Simple science* : Elementary and useful knowledge of the natural phenomena of the region and training in observation of nature, talks on water and its uses and misuse, air, light, heat, food, body, common bodily ailments and preventive measures; simple experiments with domestic utensils and fire, observations of the heavens during different times of the year and the stories relating to them. The science laboratory to be provided everywhere.
- (i) The children may be given opportunities to draw and paint not only on paper but on pots and pans, walls and floor. Coloured soils and colours prepared out of roots and leaves may be used for art work and for decoration. If the objective of art education is to create a taste for the beautiful and develop imagination, the rural child has rich artistic potentialities.
- (j) Indigenous games may be taught in the evenings to pupils and to the adolescents of the village.

4. Twelve hours per week would be adequate for this curriculum.

5. The total life of the community should be the medium of education. The teacher will get acquainted with the local crafts and occupations of the people and will make use of these experiences in the education of the children. It would, however, be valuable economically, educationally and socially if every pupil is taught spinning cotton or wool on the takli, which the children can easily carry with them anywhere and everywhere. The transition from the takli or the wheel to the Ambar Charka will be natural and economically profitable.

6. *The Teacher* : Should be a person who lives in the village and is known by the community. High academic qualification is welcome but should not be insisted upon, provided he has enthusiasm and interest in the work.

7. *Training of the teacher* : The teacher should be trained in the area on the job during short periods of discussion followed by work.

The curriculum for teacher training should consist of study of rural India and rural problems, acquaintance with the epics and folk lore and stories from history, bhajan music, study of physical and social environment, decentralized economy and participatory democracy.

The methodology course should consist of practical instruction in

the following -- story-telling, recitation, preparing reading charts and conducting first lessons in reading; psychology of number, preparation of arithmetical exercises based on rural life; observation of nature and collection of soils, rocks, etc., how to prepare simple drugs from local plants; how to encourage artistic talent and methods of social education.

Conclusion

This plan proposes to provide for the rural children an education integrated with life and living. An outstanding feature of this scheme of education is that the rural child is not taught that 'book learning' is the royal road leading to a 'white collar' job. Man's primary environment in metropolitan cities is not living nature but of the mass-man, repetitive, lifeless and mechanical and not of human beings who know one another. In an urban school the sense of wonder and reverence for life are suppressed, the children are prevented from discovering the joy, excitement and mystery of the world we live in. Real education is possible only in the heart of an intimate natural and social environment. Our Constitution guarantees to the people social justice, and it is about time when a socialistic government attempted the scheme

Wastage and Stagnation

D.S. DEVARAJA MURTHY*

COMPULSORY EDUCATION in India is introduced with a view to providing the birth right of every individual to get himself educated. Unfortunately, compulsory primary education has proved a flop so far. The major factor that could be attributed to the failure is the problem of wastage and stagnation. This is a vexed problem which has proved itself to be the biggest hurdle in the success of compulsory education scheme.

The causes for wastage and stagnation are .

- (1) Economic backwardness of the parents,
- (2) Lack of interest in education on the part of parents,
- (3) Ineffective teaching,
- (4) Irregular admission policies,
- (5) Lack of special programmes for the children of the masses.

1. Economic backwardness. It has proved to be one of the major causes of wastage and stagnation. Agriculture being the main occupation and being the main source of income among the rural folk every member of the family will be engaged in the field work. The children who have attained the school going age will be forced either to stay at home looking after the young ones or to graze the cattle. This is inevitable. The children will have to lend a supporting hand to their parents in earning their livelihood. In this regard to avoid wastage two measures can be taken. When parents are engaged in agricultural work, the young ones at home must be looked after. Some arrangements must be made for this purpose. Otherwise the teacher may be given the freedom of changing the school hours which will help in more children attending the school after assisting their parents. Further, the village as a whole can adopt a plot of 40 acres or 50 acres and also appoint one or two adults on payment basis for

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cattle grazing purpose. By so doing the acuteness of the problem may be mitigated to a large extent

2. Lack of interest in education on the part of the parents is also responsible for wastage. Parents do not have the urge to educate their children. As a result of this, they do not evince interest in educating their children. This urge is to be created in them. In order to achieve this brain wasting educational propaganda is an absolute must. This propaganda can be carried out through effective film shows, cultural activities, lectures and night classes. The moment this urge is created in the minds of the parents, they will see that their children go to school regularly.

3. Ineffective and low standard of teaching have also contributed to wastage and stagnation. If there is improvement in teaching, wastage and stagnation can be reduced. The best teacher available in the school should be in-charge of the Lower Standards because wastage and stagnation is at its peak in these classes. The child freshly admitted should be gradually and properly initiated to school life. In the initial stages importance should be attached to play-way methods of teaching. The teachers should be made proficient in these methods through various programmes. The teacher can adopt ungraded system of teaching at lower standards. The school activities and programmes should be made attractive to the children. The teacher must attempt to give individual attention to them. All the children should be asked to have textbooks and the school should provide good and sufficient supplementary reading materials. In the classroom situation teaching and learning activities should be provided in abundance. By doing so there is bound to be improvement in teaching which in turn may help in mitigating the acuteness of the problem. Irregular admission policies should be done away with. Late admissions naturally result in stagnation contributing towards wastage. Admission should be completed within a few days of the beginning of the academic year. Enrolment drive should be undertaken effectively in the early part of the year. All who are concerned should take part in this drive. The teacher or teachers should follow it up by establishing more contacts with the villagers.

4. The school must organise special programmes for the children of the masses. Informal play centres should be provided for the benefit of the children. This can be done on the basis of a Balwadi. Here, about an hour or an hour and a half could be utilised for group games, story-telling, songs and dramatics. This can be organised for pre-school children. This helps in developing good relationship between the teacher and the guardians which is bound to minimise wastage and stagnation.

5. All said and done the solution of the problem of wastage and stagnation mainly depends upon the efforts of the teacher and the administrators. The teacher must have nobility of faith, honesty of purpose and sincerity of endeavour in his profession. The teacher must be oriented thoroughly, at least once in five years, regarding the different aspects of education, namely, content, new methodology and problems pertaining to primary education. The administrator should be a friend, guide and counsellor. The united, co-operative and dauntless efforts of the administrator and the teacher will lessen the acuteness of the problem of wastage and stagnation.

Study of Wastage and Stagnation in Standard I

C.M. MEHTA*

Wastage and stagnation is perhaps the biggest problem in primary education. Large sums of money, lot of energy of teachers and a good many years of pupils are wasted

This wastage occurs mostly in the first year of schooling

STATEMENT I
Standardwise distribution of pupils in municipal schools

<i>Stds.</i>	1	2	3	4	5	6	7	<i>Total</i>
1965-66	38095	26231	25172	21082	16194	11191	8018	146583
1966-67	30660	27581	24980	24512	18670	12928	8844	157176
1967-68	40201	28014	25346	24885	18051	13122	8076	159556

It is seen that there is a gradual decrease in the student population from one standard to the next which is natural. The decrease in number from stds. IV to V is due to the fact that many parents want to admit their children to the High Schools which run stds V to XI. But the sharp decrease from standard first to second is note-worthy and alarming. This may be due to (i) large number of students leaving before completing the year, and (ii) a good number of them being detained in the same class.

This problem of wastage and stagnation in Std. I was studied for six municipal schools by the Nootan Talim Vibhag (in-service education institute for teachers).

Standard I commands the greatest number of pupils in primary schools. In fact, the number is about 25% of the total population in primary schools. But this large number in the first schooling year is, by no means, a matter for self satisfaction because the number in the second year gets fairly reduced. Thus a large number of pupils admitted to this class leaving before completing the year, fail to appear at the

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examination or repeat the same class. The present study is an attempt to find out the extent and influence of these factors resulting in huge wastage. Failure to attain the requisite standards of achievement is related to inadequate and/or irregular attendance also.

This survey attempts to study the following points :

1. The percentage of students leaving before the completion of the year.
2. The percentage of students who appear at the annual examination.
3. The percentage of students who pass the annual examination
4. The amount of stagnation
5. The amount of wastage.
6. Whether there is any sex-wise difference in the students leaving the school, those not appearing at the annual examination, those passing or failing etc.
7. The relation of failure to attendance and of the number of repeaters failing again.

The study does not aim at finding out the reasons of school leavers, irregular attendance, low achievement of pupils, relation between achievement and parent co-operation etc. This clearly needs a separate study. Six municipal schools were selected for this study. The selection of the above schools was made with the purpose of ensuring the representation of all types of pupils. Thus the study covers pupils of different wards, different communities and different religions.

The study relates to the pupils of Std. I during the year June 1967 to March, 1968

STATEMENT II
Sex-wise distribution of pupils under study

	<i>Boys</i>	<i>Girls</i>	<i>Total</i>
Number	769	553	1322
Percentage	58.2	41.8	100

STATEMENT III
Number of pupils leaving the schools during the year

	<i>Boys</i>	<i>Girls</i>	<i>Total</i>
Total	769	553	1322
Drop-outs	223	149	372
Percentage	29%	27%	28%

STATEMENT IV
Number of pupils absent at the annual examination

	<i>Boys</i>	<i>Girls</i>	<i>Total</i>
Number	73	65	138
Percentage	52.9	47.1	100

Statement III, IV compared with Statement II show that the factor of sex is negligible.

A vast majority of the pupils who left remained continuously absent and hence their names were struck off

Out of 1322 pupils admitted to the school in the beginning of the year, only 812 appeared at the annual examination, showing the decrease of 510 pupils, including 372 who left the school and 138 who did not appear at the examination. Thus only 61.4% of the pupils appeared at the annual examination, while 38.6% either left the school or remained absent at the examination

STATEMENT V
Pupils passing the examination

Number of pupils appeared at the examination	812
Number of pupils passed	569
Percentage of pupils who passed	70.1%

STATEMENT VI
Sex-wise distribution of pupils who passed

	Boys	Girls	Total
Number	328	241	569
Percentage	57.8	42.4	100

STATEMENT VII
Sex-wise distribution of pupils who failed

	Boys	Girls	Total
Number	145	98	243
Percentage	59.7	40.3	100

The sex-wise distribution of pupils who passed or failed nearly corresponds to the statement II.

STATEMENT VIII
Attendance (Out of 212 days)

	Less than 100 days	Between 100 & 140 days	Between 141 & 180 days	More than 180 days
Boys	22.7%	11.0%	37.5%	28.2%
Girls	17.2%	17.4%	35.7%	29.7%

STATEMENT VIIIA

	Attendance for less than 100 days	Attendance for more than 140 days
Boys	34.3%	65.7%
Girls	34.0%	65.4%

Attendance of the boys is the same as that of girls. About 34% pupils remain present for less than 140 days, while about 66% remain present for more than 140 days.

STATEMENT IX

Attendance of successful and unsuccessful pupils

Details	Boys				Total
	100 days or less	101 to 140 days	141 to 180 days	More than 180 days	
Number appeared	19	62	215	177	473
Number of successful pupils	10	34	140	144	328
Number of unsuccessful pupils	9	28	75	33	145
Percentage of successful pupils	52.6	54.8	65.1	81.4	
Percentage of unsuccessful pupils	47.4	45.2	34.9	18.6	

Details	Girls				Total
	100 days or less	101-140 days	141-180 days	More than 180 days	
Number appeared	12	56	138	133	339
Number of successful pupils	6	27	101	107	241
Number of unsuccessful pupils of	6	29	37	26	98
Percentage of successful pupils	50	48.2	73.2	80.4	
Percentage of unsuccessful pupils	50	51.8	26.8	19.6	

Boys and Girls together					
Number appeared	31	118	353	310	812
Number of successful pupils	16	61	241	251	569
Number of unsuccessful pupils	15	57	112	59	243
Percentage of successful pupils	51.6	51.7	68.3	81	
Percentage of unsuccessful pupils	48.4	48.3	31.7	19	

STATEMENT X

Percentage distribution of successful pupils by various attendance groups

Details	Less than 100 days	101 to 140 days	141 to 180 days	More than 180 days	Total
Number of Boys	10 (3%)	34 (10.4%)	140 (42.7%)	144 (43.9%)	328 (100%)
Number of Girls	6 (2.5%)	27 (11.2%)	101 (41.9%)	107 (44.4%)	241 (100%)
Total	16 (2.8%)	61 (10.7%)	241 (43.47%)	251 (44.1%)	569 (100%)

STATEMENT XA

Details	Upto 140 days	More than 140 days	Total
Number of Boys	44 (13.4%)	284 (86.6%)	328 (100%)
Number of Girls	33 (13.7%)	208 (86.3%)	241 (100%)
Total	77 (13.5%)	492 (86.5%)	569 (100%)

A scrutiny of these statements shows that the percentage of successful pupils from amongst those with attendance of more than 140 days works out to 86% to 87%. Similar percentage amongst those with attendance of less than 140 days is 13% to 14%.

It is clear that greater the number of attendance days greater the number of successful pupils. This result leads to the conclusion that, in general, a pupil must have the attendance of at least 140 days to go to the higher class

STATEMENT XI

Percentage distribution of unsuccessful pupils by various attendance groups

<i>Details</i>	<i>Less than 100 days</i>	<i>101 to 104 days</i>	<i>141 to 180 days</i>	<i>More than 180 days</i>	<i>Total</i>
Number of Boys	9	28	75	33	145
Number of Girls	6	29	37	26	98
Total	15	57	112	59	243
Percentage of Boys	6.2	10.3	51.7	22.8	
Percentage of Girls	6.1	29.6	37.8	26.5	
Percentage of both	6.2	23.1	46.1	24.3	

STATEMENT XII

<i>Details</i>	<i>Upto 140 days</i>	<i>More than 140 days</i>	<i>Total</i>
Number of Boys	37	108	145
Number of Girls	36	63	98
Total	72	171	243
Percentage of Boys	25.5	74.5	
Percentage of Girls	35.7	64.3	
Total percentage	20.6	79.4	

A scrutiny of these statement shows that 70% of the unsuccessful pupils have attendance of more than 140 days, while the remaining 30% have attendance of less than 140 days.

In Gujarat pupils are admitted to Std. I when they complete 5 years but only before 31st of August. Hence, there is a large number of pupils who are admitted late

STATEMENT XIII

Admissions after 31st July and successful pupils therefrom

<i>Total Number</i>	<i>Number of successful pupils</i>	<i>Percentage</i>
97	35	36.1

STATEMENT XIII

Admissions before 31st July and successful pupils therefrom

<i>Total Number</i>	<i>Number of successful pupils</i>	<i>Percentage</i>
716	534	74.7

The above two statements show that the percentage of successful pupils amongst those who were admitted after 31st July is very low as compared to those admitted before 31st July. In order to decrease the percentage of unsuccessful pupils admitted late, the schools should be allowed to admit (in June or July) those pupils who completed the prescribed age limit by 31st of August. This would probably make an appreciable increase in the number of successful pupils of that age-group.

STATEMENT XIV
New and old pupils

	<i>Boys</i>	<i>Girls</i>	<i>Total</i>
New	400 (63%)	397 (71.8%)	887 (67.1%)
Old Repeaters	279 (36.3%)	166 (28.2%)	435 (32.9%)
Total	760	553	1322

It may be seen from the above statement that about one third of the pupils are old pupils i.e. those who had failed at the annual examination of the previous year, only two thirds are new.

STATEMENT XV
Wastage

<i>Details</i>	<i>Boys</i>	<i>Girls</i>	<i>Total</i>
Total number in Std. I	760	553	1322
Pupils having nil attendance	—9	—3	—12
Net number	760	550	1310
Pupils leaving the school during the year	—214	—146	—360
Remaining pupils	546	404	950
Wastage percent	28.2%	26.5%	27.5%

STATEMENT XVI
Stagnation

<i>Sr. No.</i>	<i>Details</i>	<i>Boys</i>	<i>Girls</i>	<i>Total</i>
1.	Remaining pupils	546	404	950
2.	Absentees at the annual examination	—73	—66	—138
3.	Pupils appearing at the annual examination	473	339	812
4.	Pupils failing at the annual examination	—145	—98	—243
5.	Pupils passing at the annual examination	328	241	569
6.	Pupils of (2) passing at the exam. held for absentees in June, 1968	+13	+5	+18
7.	Total number of pupils passing	341	246	587
8.	Pupils detained in Std. I	205	158	363
9.	Percentage of stagnation	37.5%	39.1%	38.2%

STATEMENT XVII
Wastage and Stagnation

	Boys	Girls	Total
Number of pupils in Std. I	769	553	1322
Number of pupils promoted	328	241	569
Total number of drop-outs and those detained in Std. I	441	312	753
Percentage of total Wastage & Stagnation	57.3	56.4	57

It would be interesting to study the achievement of pupils who were repeaters in Std. I. The following table gives some details.

STATEMENT XVI
Repeaters in the Class

Details	Boys	Girls	Total
Detained in Std. I in April 1967	279	156	435
Leaving the school during the year	—95	—54	—149
Re-appearing at the annual examination in April, 1968	184	102	286
Passing in April 1968	130	72	202
Failing in April, 1968	54	30	84
Percentage of stagnation among the old pupils	29.3	29.4	29.4
Percentage of wastage among the old pupils	34.1	34.6	34.3

STATEMENT XVIIA
Attendance of pupils failing for the second time

Attendance	Less than 100 days	Between 101 to 140 days	Between 141 to 180 days	More than 180 days
Percentage	1.9	21.2	34.6	42.3

About 77 of the repeaters have attendance of more than 140 days. The failure, therefore, cannot be attributed to low attendance.

STATEMENT XVII
New pupils in the class

Details	Boys	Girls	Total
Number of pupils admitted during the year 1967-68	400	307	887
Number of pupils leaving school during the year	—128	—95	—223
Number of pupils remaining at the end of the year	362	302	664
Absentees in the annual examination in April 1968	—73	—65	—138
Number of pupils appearing at the annual examination in April 1968	289	237	526
Number of pupils passing in April 1968	198	169	367
Number of pupils failing in April, 1968	91	68	159
Percentage of wastage among the new pupils	45.3	44.0	44.7
Percentage of stagnation among the new pupils	26.1	23.9	25.1

A study of the statements shows that there is considerable wastage and stagnation. The number of pupils who are continuously absent and hence have their names struck off the register, tends to increase the wastage. If this wastage is to be decreased, it is necessary to carry out a serious enquiry into the reasons of irregular attendance or continuous absence of the pupils.

Conclusions

- 1 The percentage of drop-outs during the year is 28.
- 2 The percentage of pupils not appearing at the examination is about 14.5
- 3 Compared to the number of pupils in the beginning of the year, the drop-outs and absentees together at the examination constitute 39%.
- 4 Out of those that appeared at the examination 81% passed and 19% failed. Thus the stagnation would be 19%.
5. The wastage and stagnation put together will be 57%.
6. The study does not reveal any appreciable difference in the results from the sex point of view.
- 7 It appears that the passing at the annual examination is well linked with the attendance in the school. About 75% of pupils with attendance of about 140 days passed the examination. Yet the reverse cannot be true. There are a few who pass with less attendance days also. Moreover, from those that failed, it cannot be definitely said that the failure is due to irregular and inadequate attendance. Deeper study is required for this.
8. Repeaters failing at the examination again shows that besides attendance, there are other factors which contribute to this result.

Suggestions

- 1 The problem of dropouts should be tackled by employing attendance officers, by arranging better teacher-parent relationship, making lessons more interesting to pupils.
2. Stagnation can be minimised by regular attendance by making teaching more effective and interesting.
3. The best teacher should be appointed in Std. I.
4. Late admissions should be debarred.
5. In-service training programme for teachers should be undertaken.

Futurology of Expanding Education in Indian States During 1970's

II. N. PANDIT*

The Decades of Expansion

DURING THE last two decades the educational systems in different states in India experienced growth without parallel in Indian history. The size of enrolment of the whole educational system stood at 25 million in 1950-51, increased to 70 million in 1965-66, and on March 31, 1969, it is estimated to have assumed the size of 77 million. Enrolment in classes I to VIII alone increased from 22 million two decades back to 70 million in 1969 (8)† The factors which led to this explosion in primary education in the Indian sub-continent are mainly grouped into two categories : external and internal.

The major external factor can be attributed to decisions taken in the conferences held under the auspices of Unesco at Karachi (1959-60), Tokyo (April 1962) and Bangkok (November 1965). The first conference approved the working plan of Asian countries for universal, free and compulsory education of at least 7 years, education to be achieved during the next 20 years. The second conference emphasized that Asian countries should raise the ratio of resources for education to the level of 5 per cent of the GNP in 1980 and the last conference accepted a model for educational development for Asian countries during 1965-66. (12, 24 and 27).

In short, the role of Unesco in reducing illiteracy, particularly in Latin America, Asia, Africa, Arab and other developing parts of the world has been very significant, especially from 1956 to date.

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†Numerals in brackets refer to references given at the end of the paper and these are being circulated separately along with the technical annex and the methodological notes.

There are numerous internal factors responsible for the educational expansion in Indian states. At the policy level, the constitutional directive embodied in Article 45, namely, to provide free and compulsory education to all children up to the age 14, has been the main guiding factor for educational expansion at the primary level in all the three Five-Year Plans and the three annual plans in the country. On the demand side, increase in population, per capita income, urbanisation and above all the 'demonstration effect' among the different social groups are important factors which influenced parents to send their children in increasing numbers to avail of the benefit of primary education which has been highly subsidised by the Government and its agencies.

As a result of these factors, the participation rates of school-going children in the age-group 6-11 have gone up in 1968-69, to 97 per cent for boys and 60 per cent for girls. It is not possible to go into details of the progress in participation rates in different Indian states, these can be seen from Annexure I. Broadly speaking, the states of Kerala, Tamil Nadu, Mysore, Gujarat and Maharashtra have provided full enrolment facilities at primary level, while the states of Jammu & Kashmir, Uttar Pradesh, Punjab, Assam and West Bengal have partially met the social demand at this level. However, the states of Bihar, Rajasthan, Madhya Pradesh are still far below the national average.

With the help of the 1964-65 data, it has been possible to find the correct enrolment and expenditure data according to levels of school education. It is seen that 85 per cent of the total enrolment in the whole country is located in the primary and middle levels of education, and that 40 per cent of the total expenditure is allocated to this sector of education.

Although the different states in the country vary in the capacity (measured in terms of per capita income) to support educational expansion at the primary level it is interesting to note that each state exhibits a similar trend in its willingness (measured in terms of proportion of state-income devoted to education) to sustain the expansion in primary education. Only the states of Kerala, Jammu & Kashmir, Maharashtra, Mysore, and Tamil Nadu spent 3-4 per cent of their incomes on education. The remaining states spent 2-3 per cent of their incomes on education. If per capita educational expenditure is taken as an indicator of equalisation of the quality of instructional facilities one notes significant variations in inter-and intra-state per capita expenditure on primary and middle levels of school education. For example, Bihar and Uttar Pradesh spent Rs 2 and 2.8 per capita, respectively on primary and middle edu-

education, whereas the Kerala spent Rs. 7.6, Tamil Nadu, Maharashtra, Assam, West Bengal, Jammu & Kashmir and Punjab spent Rs. 5 to Rs. 6 per capita. These variations in per capita expenditure are fully explained by the variations in the average salary of teachers in different states. The level of public expenditure on education in the total state budget has also shown a considerable increase, in 1966-67 most of the states were spending more than 20 per cent of their total budget on education. Kerala, for instance, spent 37.5 per cent on education; Tamil Nadu 25 per cent; Madhya Pradesh, 23 per cent whereas Jammu & Kashmir, Bihar, Orissa, Uttar Pradesh spent between 13 to 16 per cent. Further, in most of the states, over 70 per cent of the budget was spent on primary and secondary education. Bihar spent 94 per cent of the total budget on these two types of institutions.

Sources of Frustration

The sources of frustration in primary education can be discussed under the two headings, (i) Internal Efficiency, (ii) External Efficiency.

Internal Efficiency

The most obnoxious feature of primary education in India has been the disturbingly high wastage rates. In 1967, the Unesco office at Bangkok studied wastage problems in 19 countries and investigations revealed that India was one of the four countries falling in the wastage range of 56 to 80 per cent (25).

Table 1* (col. 1) shows the dropout indicator for the educational cohort of 1956-57. On the basis of 1964-65 data, the stagnation period in different classes has been worked out and given in col. 2 of the Table. The table also shows that the unit costs vary on account of wastage and stagnation at the elementary level of education. Applying these rates to the educational cohort of 2.5 million which completed the 8th grade of education in 1963-64, we find that the actual cost for the completion of those eight grades amounted to Rs. 181 crores. Out of this 59 crores accounted for dropouts and Rs. 20 crores went into the financing of stagnation. As against the desired cost of Rs. 102 crore, the Government had to incur the expenditure of the 181 crore. This shows how enormous the cost of wastage and stagnation is in Indian education.

In Table 2 we have decomposed wastage into stagnation and dropout rates. Broadly, we observe the following trends.

*Tables are given at the end of the article.

The wastage rates are very high in classes I to II. They tend to increase up to class IV. Then wastage rates decline upto class VII. They rise after class VII. This may be due to the examination at middle stage of education. It is also seen that in the final year of the middle stage of education, the stagnation rate declines but the dropout rate increases. From the longitudinal study of educational cohorts we observe that dropout rates have been on the increase between classes I to II, II to III, and III to IV, but they decrease from classes V to VII. (See technical annexure.) In short, it shows that children who join primary schools do not attain 'functional literacy', therefore planners should shift their emphasis from fixing enrolment as the target of educational achievement to the production of literates and primary education completers. This will have an obvious implication in fixing educational strategies in terms of instruction and resources.

External Efficiency

Two important investigations, namely, the *Pearson Commission Report* and *Asian Drama* by Myrdal, which studied the effectiveness of primary education in rural areas revealed that children after completing primary education did not become creative and constructive members of their own community.

These studies are synonymous in their conclusion that education in developing countries has only become an instigator of maladjustment and structural unemployment rather than an essential source of growth and development. Therefore, if primary education has to become a force of social change and economic growth, the *content, structure and methods of instruction* have to be revolutionised so that the *attitudes, knowledge, and skills* imparted to the younger generation within the four walls (or under the roof) of the school become more favourable to social development (15, 20).

The second aspect is equalisation of opportunity in primary education. The general picture that emerges from the allocation of educational facilities in rural areas is that primary education is making inroads among the socially disadvantaged groups. But the progress is not uniform everywhere. There are a lot of intra and inter-district variations as also variations within the same state and between different states. The bigger villages, where schools existed before Independence and which thus had an early start naturally were at advantage as against smaller villages where primary education is only of recent origin and where most of the schools have only one teacher to teach classes I to IV. It is also reported that the progress of education among scheduled castes and backward communities

has been very slow, thus they have gained less from primary education as compared to other communities at higher levels of social ladder. Within village communities, it is reported that cultivators have gained more than labourers, and males more than females (1 and 13).

Future Growth

After examination of detailed state-wise trends in pupil-teacher ratios, population growth, per capita income, and costing patterns an attempt has been made to project growth in enrolment, teacher employment and operating costs of the primary and middle stages of education. The methodological details are given in the technical annexure.

Briefly the assumptions implicit in these projections are .

1. There is a steep fall in the birth-rate as visualised by the *Expert Committee* while working out projections on the basis of medium assumption.

2. By the end of 1981 all state governments would have provided full primary education in classes I to IV and created facilities for 90 per cent of population in age-group 11-14 in the classes V to VII.

3. The teacher-pupil ratio in 1981 is kept at 45 at the primary level and at 30 at middle level.

4. The costing pattern as it existed in 1964-65 has been applied to enrolments in 1971 and 1981.

The actual growth in enrolment, teacher employment and operating educational expenditure can be seen from Tables 3 to 5.

Main Issues for Discussions

The following issues may be considered for discussion in the conference.

Issue I

In theory, primary education is expected to change (increase, alter or finish) the knowledge, skills and attitudes possessed by the learner before his entry into school. If it is assumed (and there is also evidence to that effect) that primary education in India has not been able to impart the necessary knowledge, skills and attitudes favourable to change the learner's pre-school behaviour, what steps should be taken to have the desired result. Also there has been a considerable wastage of limited resources in the states on which sectors other than education have got equally important and competing claims. Therefore, the question arises as to how the present system of primary education should be changed so that it can make the younger children of the community to grow into useful members of tomorrow's society.

Three suggestions are made :

1. The unit for planning for primary education should not be fixed in terms of enrolment but in terms *literates* and in terms of *completers* of primary and middle education.

2. We may think of fixing targets in terms of imparting total quantum of knowledge, skills and attitudes and see how these can be attained in the minimum effort and time. One way might be to reduce the 7-year period of primary education to a lesser number of years, without disturbing the total education expected at the primary and middle levels.

3. Instructional facilities may be individualised. The advantages of individualised instructions go beyond classroom teaching. It may allow children to pursue their education without disturbing their employment careers. The possibility of Prof. Aiya's *Open School* system is quite relevant in this context and may be considered.

Issue II

If it is a fact that a poor man's child, put in an educationally better school has lower performance as compared to a rich man's child even if he has been put into a poorer school or in other words, if 'home environment' is much more powerful than school environment in attaining educational standards, should not planners fix the criteria of equalisation of educational opportunity in terms of attainment in the schools instead of provision of facilities? The implication of this perhaps is the arrangement of extra-educational facilities for children coming from poorer and socially disadvantaged communities so that they may overcome the deficiency which they suffer on account of their family background.

Issue III

If it is a fact that income and employment opportunities are distributed more on the basis of social class relationship, income of parents and other non-educational factors, thus distribute economic and social gains more in favour of the richer and more advantaged classes of the society, then education does not seem to be a causal factor in improving the economic opportunities of the poorer sections of society. If so, then changes outside of education should be brought about so that education can play an effective role in the re-distribution of opportunities in developing states.

Issue IV

There has been an increase in the average salary of the teacher, at current and constant prices. Also, there is evidence that the

pupil-teacher ratio has either remained constant or shown a decrease during last two decades. As a result of these two and other factors, the cost of education per student has gone up and states have already reached the saturation level in terms of their capacity to allocate from the existing budgets to education. At the same time, as there seems to be no possibility of generating resources from the internal (fees) and external sources of finance, the state government have to find new ways and means for financing future expansion in education. In this regard, the possibility of levying educational cess and other forms of contribution from the community are to be identified and recommended for different states.

TABLE 1
Average Operating Cost per Student Completing Different Classes at Primary & Middle Stages of School Education
1964-65

Class	Dropout Index for 1956-57 cohort	Stagnation period (in years)	Operating Cost per Student year	Additional Cost Per-Student due to		Total
				Dropout	Stagnation Cols 3 + col.4 + col 5	
	1	2	3	4	5	6
0						
I	3 042 (1 42)	0.32	30.40	92 48 (43.17)	9 73	132 61 (83 30)
II	1.392 (0.433)	0.24	30.40	42 32 (13 16)	7 30	80 20 (50 86)
III	0.984 (0 188)	0.21	30.40	29 91 (5 71)	6.38	66 69 (42 49)
IV	0 670	0.19	30.40	20 37	5.78	56 55
V	0 419	0.17	70 40 (45 6)*	29 50	11.97	111 87
VI	0.184	0.17	70.40 (45 6)*	12 95	11 97	95 32
VII	0.051	0.16	70.40 (45 6)*	3 59	11 26	85 25
VIII		0.20	70.40 (45 6)*		14 08	84 48

*Cost per pupil, year in the middle schools

NOTE: Figures in brackets relate to literates

TABLE 2

Wastage, Stagnation and Dropout Rates by Classes for 12 Indian States, 1984-85 to 1985-86.

S.No.	Classes	Boys			Girls			Boys & Girls			
		Wastage		Stagnation	Dropout		Wastage	Stagnation		Dropout	
		1	2		3	4		5	6		7
0		1	2	3	4	5	6	7	8	9	10
1	I-II		50.63	27.68	22.95	52.61	29.17	23.44	51.38	28.24	23.14
2	II-III		30.61	20.26	10.35	33.32	21.38	11.94	31.60	20.67	10.93
3	III-IV		28.50	17.67	10.83	31.45	18.85	12.60	29.53	18.08	11.45
4	IV-V		27.13	15.98	11.15	32.53	17.54	14.99	28.92	16.50	12.42
5	V-VI		22.41	14.60	7.81	29.04	16.09	13.55	24.64	15.04	9.60
6	VI-VII		21.68	13.54	8.14	25.90	14.39	11.51	22.93	13.80	9.13
7	VII-VIII		25.44	12.13	13.31	26.17	12.13	14.04	25.65	12.13	13.52
8	All Classes		34.17	14.06	20.11	33.53	16.52	22.01	35.69	14.92	20.77

TABLE 3
Actual and Projected Enrolment of Primary and Middle Stages of Education by Indian States, 1971 and 1981

S No.	State	Primary				Middle				Total (In lakhs)	
		1964-65 (actual)	1971	1981	1984-85 (actual)	1971	1981	1984-85 (actual)	1981	1971	1981
		2	3	4	5	6	7	8	9	10	10
0	1										
1	Jammu & Kashmir	28	35	52	0.8	1.5	3.1	3.6	5.0	8.3	8.3
2	Punjab	221	29.7	45.0	6.2	12.5	26.4	28.3	42.2	71.4	71.4
3	Rajasthan	15.4	23.3	41.1	3.1	9.8	24.2	18.5	33.1	65.3	65.3
4	Uttar Pradesh	81.1	92.6	128.4	13.5	35.9	76.2	94.0	128.5	204.6	204.6
5	Bihar	37.4	47.2	86.5	6.5	19.7	50.5	43.9	66.9	137.0	137.0
6	Orissa	17.7	21.8	30.2	1.8	7.6	18.0	19.5	29.4	48.2	48.2
7	West Bengal	38.1	46.2	70.8	7.9	18.4	41.2	46.0	64.6	112.0	112.0
8	Assam	14.3	16.8	28.3	3.0	6.6	16.1	17.3	23.4	44.4	44.4
9	Maharashtra	42.9	58.4	72.4	14.7	23.3	42.8	57.6	81.7	115.2	115.2
10	Madhya Pradesh	27.5	35.7	60.4	5.2	15.6	35.4	32.7	51.3	95.8	95.8
11	Gujarat	23.2	31.0	41.8	6.9	11.6	24.6	30.1	42.6	66.4	66.4
12	Andhra Pradesh	36.0	42.0	57.7	5.9	16.3	34.5	41.9	58.3	92.2	92.2
13	Mysore	27.7	32.7	42.4	7.0	13.0	25.0	34.7	45.7	67.4	67.4
14	Tamil Nadu	44.1	41.1	45.8	9.7	18.8	27.8	53.8	59.9	73.6	73.6
15	Kerala	25.8	27.7	30.2	8.4	12.5	18.1	34.2	40.2	48.3	48.3
16	All India	465.9	562.0	803.7	103.7	228.8	474.3	569.6	790.8	1278.0	1278.0

TABLE 4
Actual and Projected Growth in the Stock of Teaching Manpower in Indian States, 1965-81

S.No.	States	Primary			Middle			Primary			(Figures in 000's)			
		1965 (actual)	1971	1981	1965 (actual)	1971	1981	1965 (actual)	1971	1981	1965	1971	1981	1981
0	1	2	3	4	5	6	7	8	9	10				
1	Jammu & Kashmir	7.6	7.8	11.5	4.3	4.9	10.2	11.9	12.7	21.7				
2	Punjab	44.8	66.1	100.1	23.8	41.6	88.0	68.6	107.7	188.1				
3	Rajasthan	44.0	51.7	91.4	16.4	32.6	80.7	60.4	84.3	172.1				
4	Uttar Pradesh	151.9	205.9	285.4	52.0	119.8	264.1	203.9	323.7	539.5				
5	Bihar	85.0	105.0	192.2	291.2	65.7	168.4	114.2	170.7	360.6				
6	Orissa	46.0	48.4	67.1	15.7	25.5	60.1	61.7	73.9	127.2				
7	West Bengal	101.4	102.6	157.4	31.2	61.5	137.4	132.6	164.1	294.8				
8	Assam	30.8	37.3	63.0	13.0	22.0	53.7	43.8	59.3	116.7				
9	Maharashtra	110.7	129.8	160.8	57.4	77.8	142.8	108.1	207.6	303.6				
10	Madhya Pradesh	75.4	79.3	134.3	28.0	52.1	118.0	103.4	131.4	252.3				
11	Gujarat	54.1	68.9	93.0	27.0	38.6	82.0	81.1	107.5	175.0				
12	Andhra Pradesh	84.3	93.3	128.2	30.5	54.2	114.9	114.8	147.3	243.1				
13	Mysore	64.9	72.6	94.3	26.9	45.3	83.3	91.8	115.9	177.8				
14	Tamil Nadu	107.9	91.3	101.9	49.3	62.7	92.8	157.2	164.0	194.7				
15	Kerala	62.7	61.6	67.1	39.4	41.6	60.2	102.1	103.2	127.3				
16	All India	1102.7	1249.0	1786.0	460.1	702.6	1580.9	1562.8	2011.6	3866.9				

TABLE 5
Actual and Projected Operating Cost of Primary and Middle Stages of Education by Indian States, 1971 and 1981
(At 1964-65 Prices)

S. No.	States	(In crores of Rs.)									
		Primary					Middle				
		1964-65	1971	1981	1964-65	1971	1981	1964-65	1971	1981	Total
10	1										
1	Jammu & Kashmir	1.2	1.5	2.2	0.7	1.3	2.6	2.8	2.9	4.9	
2	Punjab	7.1	9.5	14.4	4.6	9.3	19.5	12.7	19.6	36.3	
3	Rajasthan	6.9	10.4	18.8	3.7	11.8	29.1	11.0	12.2	49.0	
4	Uttar Pradesh	14.3	16.4	22.7	8.3	23.0	46.7	25.6	42.2	75.5	
5	Bihar	7.4	9.3	17.1	2.8	8.6	22.0	11.9	20.4	44.2	
6	Orissa	4.5	5.5	7.6	1.7	7.2	16.9	7.1	13.3	30.5	
7	West Bengal	12.8	15.5	23.7	7.2	16.7	37.4	22.6	35.7	67.1	
8	Assam	4.1	4.8	8.0	2.4	5.4	13.0	6.9	10.6	21.8	
9	Maharashtra	18.5	25.2	31.2	6.9	10.9	20.0	26.5	37.3	52.8	
10	Madhya Pradesh	12.0	15.5	26.2	4.7	14.2	32.2	18.5	32.5	63.0	
11	Gujarat	9.4	12.5	16.9	1.6	2.7	5.6	11.9	16.2	24.0	
12	Andhra Pradesh	10.2	12.0	16.4	5.9	16.1	34.0	17.2	29.5	52.6	
13	Mysore	9.0	10.7	13.8	3.5	6.5	12.5	13.4	18.2	27.7	
14	Tamil Nadu	15.8	14.7	16.4	3.8	7.4	10.9	20.4	23.0	28.4	
15	Kerala	8.8	9.4	10.2	5.7	8.4	12.2	15.3	18.7	23.3	
16	All India	142.0	172.9	245.6	63.5	137.9	314.6	223.8	332.3	601.1	

Handicapped Children in Ordinary School

CHANGIAL MEHRA†

SCHOOLING IS a child's educational birthright. This right is not being enjoyed by a minority of children—the handicapped as compared to normal children. The education of handicapped has not received due attention of educationists. Therefore, the parents of such children are faced with the problems of their education. Since for sometime to come India will not be in a position to have special types of schools for the handicapped the ordinary schools will have to take care of all the categories of children, including the handicapped.

The handicapped children may be classified under the following categories which have to be taken care of by ordinary schools* Children with partial vision, partial hearing, or hard of hearing, minor speech defects, physically handicapped, educationally retarded, educationally backward, maladjusted and delicate.

No upto date statistical information about the above mentioned categories of handicapped children is available. However small their number may be, the regular classroom teachers in ordinary schools have to take care of these children even though they are not trained to handle them.

For educational purposes the visually limited and hard of hearing are distinguished from the normally seeing and normally hearing and within these groups the partially seeing and partially hearing are differentiated from the blind and deaf in terms of the degree of useful vision and hearing capacity they retain or in terms of the media in which they read and hear and do school work. Speech handicapped children are those who stutter, who have voice disorders, articulation problems and physical abnormalities. There is no denying the fact that speech correctionists and speech experts are required to work with this group of children. But in the absence of expert advice

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*Deaf, dumb and blind are excluded from this list because they need special schools.

and guidance the classroom teacher should assume the responsibility and do some effective work. Physically handicapped children may have muscular or skeletal deformities which are apparent to the casual observer. Their major problem is locomotor in character. If these children are within the normal range of intelligence the crucial problem for the teacher is the manner in which these handicaps affect children's functioning in a learning situation. The teacher will more often have to deal with emotional problems rather than physical. Educationally retarded are those children who can usually be educated in the regular classroom if they are allowed more time than the average child to master the subject matter. Educationally backward are those who lack educational stimulation at home, neighbourhood, as well as from their companions outside school hours. These children need extra and special help with certain problems which are difficult for them.

In view of the financial difficulties and paucity of well-trained teachers for handicapped children it will not be possible to provide special educational facilities to all categories of handicapped children in near future. Provision has, therefore, to be made to provide education to all these above mentioned categories of children in the classroom with non-handicapped children. Any teacher of an ordinary school will be able to help handicapped children in his class if he is alert, observant, consistent, understanding, affectionate, interested in the welfare of children and has sympathetic attitude towards them. The teacher should be in a position to observe certain clues which serve as danger signals for physically and educationally handicapped. Some general significant clues are given below.

The child who generally appears lazy or dull, complains about his inability to see or hear, seems confused or either ignores or does not comply with directions, is irritable, has poor eye-hand coordination, frequently loses the sentence on the page when attempting to read, and is educationally retarded or backward.

According to the Education Commission Report (1964-66) there are at present 115 schools for the blind, 70 for deaf children, 25 for orthopaedically handicapped and 27 schools for the mentally retarded. Only two centres for the training of teachers of mentally retarded children are functioning and their annual output of teachers is only 20.

It is obvious that the present facilities for the education of different categories of the handicapped are inadequate and something has to be done to tackle this problem.

Some Short-term Plans

- 1 *Size of the handicapped* : An attempt should be made to deter-

mine the size of various categories of handicapped school going population at the district level. It will be easy and less time consuming if these estimates are made at the district level.

2. *Short-term Courses* - Such as Summer Institutes, weekend courses, evening and correspondence courses for school teachers should be planned and organised on a priority basis. An attempt should be made to train the teachers to give ordinary screening tests of vision, to observe physical and behavioural symptoms of eye trouble and thus identify visually limited children. Some courses for the training of teachers to use the whisper test and to measure the hearing capacity of the child should also be organised. Training for good speech should also be given to the teachers so that they present good speech models for children with speech defects.

3. *Mobile School Health Service* could also be provided for schools in a number of ways. For instance, (a) a number of schools may be attached to a nearby dispensary, specially in those areas where annual medical check-up is non-existent. A doctor and a nurse may visit the school on certain fixed days for a medical check-up of children. (b) the extension centres can also have a doctor and a nurse on its staff who may look after the health of school children. All the schools attached to one Extension Centre may be taken care of by the centre. Doctor's assistance can be sought in identifying handicapped children.

4. *School Complex Programme* may also take up this programme and the teacher training institution working with a number of schools can also include medical check-up along with their academic improvement programme. Seminars, orientation courses, and short-term training courses can be organised by teacher training institutions for handling different categories of handicapped children for the benefit of prospective teachers. The S.T.E.s may also take up programmes at a state level.

5. *Formation of Guidance Committee in School*. The purpose of this committee is to help teachers understand their students and learn to work with them more effectively. Meetings of guidance committees may be held whenever teachers need assistance in studying children who are handicapped. This committee will conduct a sort of case conference and the teachers will pool their information about the child under reference. A programme of action may also be planned by the committee taking into consideration the positive elements of the child. Things can be accomplished even without a specialist. Attempts should also be made to collect information from the parents. Services of a specialist or an expert in the concerned field may also be obtained, if available.

6. *Community Resources to be Tapped* : There may be some

persons in the community who have knowledge about the different categories of handicapped children and who may also be willing to help school teachers, when approached. These persons may help either in identifying or in handling handicapped children. There may be retired doctors, experienced teachers, psychologists etc. who would willingly work in the school to help handicapped children.

7. *Ungraded Classes* : Ungraded classes, especially for educationally backward/retarded children may be another solution for helping them. Ungraded classes is not a new idea but it has been limited to those rural areas wherever there is shortage of trained teachers for a number of reasons.

8. *Auto-instructional material* : Tutorial assistance is not possible in our schools. Therefore a compromise has to be made where no tutorial assistance is available. Certain auto-instructional material or programmed learning material can be developed for such children which they can themselves handle when the teacher is busy with other children.

9. *Curriculum of Teacher Training Institutions* : Though it is not a short term programme yet the teacher training institutions have to work in this direction and include a special paper on handicapped children in their syllabus. This should be made compulsory for all students who undergo teacher training courses. Some practical work should be included with theory. The emphasis should be on how to identify and teach such children in regular schools with non-handicapped children.

10. *The Role of the NCERT* : The NCERT should organise orientation courses for S.T.E. personnel and also short term courses for teacher-educators in order to acquaint them with the problems of identification, education and several related problems of the handicapped children in regular schools. Besides this the NCERT may also work in the direction of 'open' school system which may be one of the possible means for the training of teachers for handicapped children. The NCERT is working actively to develop a good language-laboratory. An attempt should be made to develop instructional material in this laboratory for handicapped.

There is no denying the fact that systematic work has to be done during the early years of education. The beginners need most the care that could be given to them. In the absence of scientific tools and trained personnel for detection of various types of handicaps, ordinary, trained teachers have to work with handicapped children. They have to understand the needs of these children and help them in their studies as well as social and emotional adjustment. They

have to accept the handicapped, give them friendly, warm understanding, develop a sympathetic attitude, build up a relationship of mutual trust and respect and give them full opportunities to function as normal individuals. In order to make the handicapped children independent in finding their place in society some short-term and long-term programme for the training of school teachers are essential and steps should be taken immediately by all concerned namely, Central and State Departments of Education, NCERT, S.I.Es, training institutions, extension centres, Guidance Services, School Health Service, Social Welfare Boards, Hospitals and other voluntary agencies. This should receive top priority in all the educational plans of the centre and states. Provisions should be immediately made to train the teachers in service for identifying and handling such children.

Financing of Primary Education in India

P. R. PANDHARUMUKHI*

It is commonly said that the United States is a nation of ninth graders or tenth graders, since the average length of formal schooling of the entire population probably does not exceed ten years. As against this in India average length of formal schooling of the entire population is hardly one year, it is about 336 days. It is against this contrasting picture that we have to appreciate the nation's effort to provide universal education to all children in the age-group 6-14 years. According to the latest calculations, the constitutional directive in this regard will be fulfilled by 1990-91, and the provision of universal primary education to all in 6-11 age-group by 1987-81. With this end in view, many programmes of primary education have been included in the Fourth Plan.

Magnitudes of the Problem of Finances

About 79.2% of children in 6-11 age-group are supposed to be enrolled now in primary schools. This percentage will be raised to 92.3% by the end of the Fourth Plan. About 5% of rural population do not have primary schooling facilities at present. Priority is, therefore, given in the Fourth Plan to opening primary schools in about 16000 rural habitations with a population of 300 or above, which are at present without a school within a distance of one mile. It is expected to enrol 180 lakh additional pupils in classes I-V. Thus the expansion of primary education alone will cost about Rs 178.20 crores during the Fourth Plan. Assuming that 65% of this is to be borne by the Government, Rs 115.73 crores will be the government cost of primary education. Special programmes in primary education such as the supply of better textbooks and school meals to at least some percentage of children, buildings and equipment, improvement of quality of teaching, training of teachers, etc., would

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further raise the cost by Rs. 54.24 crores i.e., to Rs. 206.54 crores. Thus the total allocation to the primary education during the Fourth Plan is expected to be about 234 crores claiming about 10% of the total outlay (plan and non-plan) on education of Rs. 1352 crores. Thus, the unfulfilled tasks in respect of primary education are many and the pressures on the resources of the economy are heavy. Out of every 100 persons, 15 to 20 persons stand demanding primary education in India by virtue of their being within 6-11 age-group. And this number has been increasing over time. On account of the 'option effect' of primary education for further education, there would be competing demands on scarce resources by the further levels of education also. Hence the pressure on the educational budget on account of primary education is bound to rise continuously. Our problem is how to find additional resources to finance this quantitative and qualitative expansion of education.

Primary education as a merit-want service

Primary education can be considered as a 'merit-want service' (to use the terminology suggested by Musgrave) with a larger degree of publicness. Though persons not paying the price for this service can be excluded from the enjoyment of the service, (thus in this sense, exclusion principle can be applied), the determination of the price of this service itself is not possible, because, primary education involves external benefits and intangibles. The degree of publicness increases with the increasing amount of externalities and intangibles. Even though the price of this service does not reflect fully social benefits and social costs, and arbitrarily determined price is charged by private schools and 'exclusion principle' is made applicable in a general way to primary education. Hence this service is of the nature of a private good also. However, the government considers this service to be so meritorious from society's point of view that in addition to the private sector it also has to supply this service. Hence, it can be considered as a merit-want service. Public provision of this does not mean that it should be produced by the public sector alone. Primary education may be supplied by the public sector in its own institutions or also by subsidising other institutions managed by the private sector.

The public funds (Government and local authorities funds) for primary education are undoubtedly very large. Public sector bears nearly 95% of the total expenditure on this item. Even in the case of private institutions, (except unaided ones) 83% of the funds come from public sources. The importance of public funds is evident in the table below :

Source of funds for primary education
(% to total funds for Direct Exp.)
1964-65.

<i>Primary Schools managed by</i>	<i>Govt. funds</i>	<i>Local body funds</i>	<i>Fees, endow- ments & other sources</i>
Government	99.60	0.01	0.36
Local bodies	81.80	17.81	0.38
Private aided	79.90	3.43	16.60
Private unaided	0.83	0.34	98.83
Total	84.36	10.76	4.88

The role of local bodies

Historically, primary education has been the responsibility of the local authorities. However, gradually this trend has changed as will be evident from the following table*

Source of finance of primary education
(Per cent to total expenses)

	1901	1936-37	1947-48	1951-52	1956-57	1964-65
Govt. funds	13.5	48.2	59.4	68.7	74.5	84.4
Local funds	37.2	35.2	31.6	25.0	10.7	10.8
Fees	20.3	6.0	3.5	2.5	3.1	2.8
Other sources	28.0	10.6	5.5	3.8	2.7	2.0

A sample survey by the Rural Urban Relationships Committee (1966) revealed that only 64% of the urban local bodies incur expenditure on education. 14 out of 64 local bodies incur a per capita expenditure on education between Rs 5 and Rs 10 and another 26 are incurring expenditure between Re 1 and Rs. 5. But as many as 22 incur per capita expenditure of less than Re. 1. This expenditure is mainly on primary education. This can be contrasted with the average per capita expenditure on primary education of Rs. 1.75 for the country as a whole. Statewise analysis shows that local bodies in Assam have not spent any thing while those in Kerala and the Punjab are spending negligible amounts on education. In these states municipalities are not providing primary education and

*Derived from *Compulsory Education in India*, K G Sanyal, J P. Naik and S. Abid Hussain. UNESCO 1966.

the state governments also do not give any grants-in-aid for this purpose. Some local bodies in Andhra Pradesh, M P, Maharashtra and U P spend significant amounts on education. But by and large, the majority of local bodies grumble that their resources are insufficient to satisfy the demands made on them in respect of universal primary education. Even bigger municipalities like Hyderabad, Bangalore or Gwalior make no contribution to the support of primary education. It may be stated that many local bodies have not exploited their resources fully though in the case of some local bodies difficulties are really genuine. Educational cess on land revenue, for example, is not levied by all the rural local bodies. As the Education Commission recommended educational grants-in-aid to the local bodies should be related to the amount raised from the education cess so that a built-in incentive is provided to exploit the local resources. Similarly, in the case of urban local bodies the education cess on property tax or house tax may be charged. The Bombay Municipal Corporation collects as much as Rs. 15 to 2 crores, from education cess the rate of the cess being $2\frac{1}{2}$ % of the rateable value against the maximum permissible of 5%. Though increase in the land revenue by the Zila Parishads would involve political resentment, the use of the proceeds for compulsory education may tone down its intensity. Some urban local bodies complain that they have not been able to exploit the property tax and the education cess fully because the state government has also levied a similar tax. Thus, recently West Bengal Government and the U P. Government levied a property tax in addition to the one imposed by local authorities. Education cess is levied by the Government of Maharashtra also. It may be stated that education cess and property tax may be left completely in the hands of the local authorities; at the same time, all local bodies should be compelled by legislation to levy education cess and property tax so that enough resources are obtained for the purpose of primary education.

The role of the government and private funds

The central and state governments have been spending on primary education significantly both on their own institutions and the institutions managed by local bodies and private bodies. On account of the gradual abolition of fees in a majority of schools, and on account of the present meagre resources of the local bodies, government's grant-in-aid should be so devised as to give incentive to the local bodies and private bodies to exploit their own resources fully. The grant system should also have an objective of equalization of opportunities for primary education between advanced and backward regions

by giving larger grants to backward areas. It is only in the case of private unaided schools that government funds are least important. In their case the fees fetch 59.8% and endowments and other sources 39.1% of total funds. This shows that there are private sources which can be exploited well. (Though expenditures of such schools are only 1.8% of total expenditures on primary education). The private charity can be expected to relieve the burden on other sources of finance. Private donations for primary education can be encouraged by providing special tax concessions to the donors in income calculations.

In search of additional revenue

As the brunt of the burden of finances of primary education falls on public sector new sources will have to be exploited. Suggestions in respect of educational cess, grant-in-aid and tax concessions have already been made above. The following suggestions may be made for additional levies.

1. Professions tax : All local bodies have not exploited this tax. Though there is a demand from the local bodies that the maximum limit of the tax be raised from Rs. 250 to Rs. 500 in case of individuals and to Rs. 2000 in the case of companies, even in the present form it may be tried with the assistance of the state governments.

2. A surcharge on entertainment tax : A show tax and a theatre tax.

3. An ad valorem levy on periodicals of general interest other than newspapers. A 10% ad valorem levy on 2 crore copies of such periodicals of an assumed average price of 50 paise may fetch Rs. 10 lacs (as per 1960 figures).

4. A small ad valorem rate of 2% on LIC premiums. This may fetch around Rs. 3.30 crores. (as per 1967-68 figures).

5. A flat charge of Re. 1 on radio receivers. This levy may fetch Rs. 54 lakhs (1965 figures) which may be collected by the P & T Department while issuing annual licences.

6. A salt tax which is given up on political grounds may be re-introduced for the genuine cause of primary education. It may be observed here that many policies once given up for emotional reactions are now re-introduced (e.g. abolition of prohibition).

Concluding Observations

In order to exploiting additional sources of funds, it is necessary to raise the level of efficiency of utilization of existing funds, by measures of economies and fuller utilization. The Education Commission's suggestion for introducing the shift system in the use of build-

ings and equipment of primary schools may be tried. Some costly programmes such as school meals programme may be avoided in those cases where it is not necessary. The rule that government grants lapse by the end of the financial year compels erratic and last minute craze in spending. For encouraging economy, the grant may be allowed to be funded.

Thus the problem of financing the compulsory primary education in India is of many dimensions and has to be tackled at all levels simultaneously.

An Economic Analysis of Pre-School Education in India

RAMESH CHANDRA*

The Conceptual Frame-work

THE OBJECT of this paper is to highlight the economic significance of pre-school education. So far economists have paid very little attention to education. In recent years, however, some prominent economists like Prof T W Schultz, Gary S Backer, John Vaizey and in India Prof V K R V. Rao and Dr. A.K. Sen etc have started taking keen interest in the field of economics of education. These economists too have unfortunately not attempted pre-school education as focus of their attention. T W. Schultz feels that a term like economic value of education will look very strange to an economist and still more to an educationist who seldom leaves the familiar grooves of ideas like personality development, character building etc constituting aims of education. Lala Lajpat Rai, the great social reformer and modern educationist, denounced this as the sole purpose of education. He advocated the money value of education in his book 'The Problems of National Education in India' and suggested the adoption of the principle of productive education, so that the country could develop economically.

Pre-School Education as an Investment in Child

'Child' is the part of 'human wealth'. Human wealth can be made productive by investing in man at different stages of life. "It is a simple truth that people invest in themselves" and this process starts from the early childhood. Among the various investment that a man makes in himself, education appears to be the most important at all stages of life. The traditional belief was that economic development depends largely on non-human components namely, land and capital. The recognition of the 'residual factor' has proved that education plays an important role in a nation's economic growth.

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The investment of pre-school education in a child is done, among other things, to develop him after a certain age as a 'productive social human being'. S. L. Welfheing says that to succeed in the early years of school is so crucial that it determines in essence what the person is going to be. It determines whether he is going to be normally productive self-determining person . . ." This means that the type of investment which is being discussed here is a long-term process. Education in itself is a long-term investment, but pre-school is even more so because its effects are fairly noticeable in the later part of life.

The instruction given at the pre-school stage to a child is the part of human resource development which eventually helps him in the economic development. The human resources are developed through many ways, education is one out of the many. The foundation of human resource development starts in the real sense from the early childhood. At this stage, the emotions of the child are channelised in a proper way and set in the right direction. "Certainly the emotional development of the child", N. S. Light remarks, 'is of the greatest importance to him and to society, and yet, educationally little is known about it and still less is done about it.' The education in relation to human resource development is a 'continuous process' and 'starts from the first level of education to higher education . . .'

While considering pre-school education in these terms one should not regard it merely as a means for increasing production, but in fact intended to mould the child into a fully developed human being. When we say that pre-school education is an investment, the whole point of our emphasis is to enable the child to become a productive member of the society who would contribute to its economic development. At the same time, full recognition is to be given to those habits and skills imparted at this stage "on which our civilization rests and which we take for granted."

Economic Factor in Child Development

Rarely does an economist have the knowledge of all the factors responsible for a child's development. Very little attention has been paid to the economic problems of children which play an important role in their development. The child is treated as a dependent unit of the households and therefore rarely merits an economist's consideration. This is not fair toward a significant part of 'human wealth'. Even if no tuition fee is involved, here other economic factors are faced both by the poor and rich alike. For obvious reasons, the poor suffer most. Such economic obstacles should not come in their way because all children are assets of the nation.

Returns on Pre-School Education

As pointed out earlier, pre-school education is a long-term investment, therefore, its returns are also visible in the later years of education. Pre-school education inculcates the habit of attending school regularly and helps in the reduction of wastage. Education Commission (1964-66) pointed out that "Modern researches have shown that the years between three and ten are of the greatest importance in child's physical, emotional and intellectual development. It has also been found that children who have been to a pre-primary school show better progress at primary stage and help in reducing wastage and stagnation."

The returns on pre-primary education that accrue to the child and the society, being intangible are generally difficult to measure in economic terms. Since they are not precisely measurable one should not conclude that pre-school education is not important from the economic viewpoint. This tendency can also be explained in the language of economics. As every industry requires 'initial investment' before the actual production starts so does the education industry need pre-school education as the 'initial investment' for its smooth functioning. In other words, we can say that better returns on primary and secondary education are possible if we make adequate investment in the form of pre-school education. There are several tangible advantages of pre-school education which have a direct bearing on the production of a country. For instance, creches, day-care centres and nursery schools etc. release 'women' power for outdoor work, the assumption being that work is available.

Some Economic Implications

After discussing some concepts of economics which may be applied to pre-primary education, we now turn to examine the various inputs needed for this stage of education. "We begin with students because they are the prime inputs of any educational system." The enrolment figure as given in 'India 1968', for the year 1950-51 was 21,640 which rose to 2,34,268 in 1964-65. This excludes pupils in institutions attached to primary and secondary schools. The percentage increase in five year's intervals i.e. between 1950-51 to 1955-56 and 1955-56 to 1960-61 was respectively 107.92 and 203.01 per cent. But as this increase does not give a clear picture, we have to work out further per year increase from 1960-61 onwards. Similar exercise, however, could not be done for the period 1950-51 to 1960-61 as the yearly data were not available. If we take 1960-61 as the base year, the percentage increase in the following years was found to be uneven. In 1961-62 it was 22.84 per cent but it decreased in the following

two years and then again showed a speedy increase in 1964-65 i.e. 31.03 per cent. The working group on Pre-Primary Education of Education Commission (1964-66) estimated that there existed about 20,000 Balwadis with a total enrolment of about 6,00,000 and unrecognised schools functioning specially in urban areas as about 12,000 with an enrolment of about 6,00,000 students. However, these are merely estimated figures and are available from unpublished sources.

While the enrolment from 1964-65 showed a speedy increase, schools did not keep pace with it, in fact, they even decreased at the rate of 6.23 per cent resulting in over-crowded schools.

'Teachers, next to students, are the most crucial inputs of an educational system'. Taking 1960-61 as the base year, the percentage increase was uneven in the successive years. In two years i.e. 1962-63 and 1963-64, it registered a declining trend but in 1964-65 again showed a significant increase.

The growth of teachers also did not keep pace with the increase in students' enrolment, resulting in a continuous increase in the teacher-pupil ratio. In 1964-65 it was 37 students per teacher. It should be difficult for a single teacher to handle 37 students specially at the pre-school stage where each student requires special care.

Because of the limited space, it would be difficult to discuss every item of financial input, we would discuss here only the direct expenditure. The direct expenditure has increased from Rs. 12.00 lakhs in 1950-51 to Rs. 100 crore in 1964-65. Though in absolute terms, there was a continuous increase, the percentage increase over the previous years calculated from 1960-61 shows an uneven trend. While on one hand the total direct expenditure showed increase, per student direct expenditure showed a continuous decrease i.e. from Rs. 55.36 in 1950-51 to Rs. 42.69 in 1964-65. This means, that direct expenditure did not increase with the increase in enrolment hence reduced per capita expenditure.

It would not be out of place to mention that the resources for pre-primary education have always remained insufficient. This is partly because as Education Commission (1964-66) remarked the emphasis has been on primary education rather than on the pre-primary. The time has come when attention should be paid to the pre-primary education as well. The Indian Yearbook of Education, 1964, has stated "by far the most important reason for, 'the poor attainment in class 1 is irregularity of attendance. When a child is newly enrolled in school, he is first unwilling to attend. A child takes about 6-8 months for what is called being accustomed to attend school.'" Thus it is felt, irrespective of the importance of

primary education given in our Constitution, adequate resources should be provided to pre-primary education. The stage that has so far been neglected by economists and educationists should now receive adequate attention as it forms the part of the infra-structure of India's educational system.

The Educational Problems of Indian Tribes—A Few Suggestions

DR. L. R. N. SRIVASTAVA*

IMPARTING EDUCATION to the 30 million tribal people of India is the constitutional obligation of the Central and State Governments. Efforts have been made to discharge this obligation, but there still remains a wide gap between the educational achievement of the country as a whole and of the tribal people. There are some very serious problems of education of the tribal children. They are of special nature and need special attention. Once they are resolved it is hoped that the gap would be considerably narrowed down.

Ordinary teachers, who are pivots of any educational structure, lack certain basic skills required to teach tribal students. Most of the teachers serving in tribal areas are drafted outside but posted there. There have been cases when teachers have been sent to tribal areas under punishment. By and large, these teachers are unaware of the tribal life and culture which keeps them isolated in tribal villages. They do not even know tribal languages. Students find it difficult to communicate with them, as they, in their turn, do not know the language of their teachers. It is, therefore, imperative that teachers posted in tribal areas are given training in tribal life and culture along with educational methods and practices.

Schools in tribal areas are numerically very small. Normally primary schools, except the ashram schools and the inter-village schools of NEFA, do not have hostels attached to them. Means of communication in tribal areas being hopelessly bad, it becomes difficult, if not impossible, for small children to attend schools at a great distance from their villages, especially during the rainy season. The opening of schools within a reasonable distance of the village or attaching hostels to schools will thus reduce the incidence of drop-

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out of tribal students. *Ashram* schools, by and large, have been successful in tribal areas. They may be extended to as many villages as possible.

The condition of the schools, wherever they exist, is deplorable and hardly conducive to education. Many have no building of their own, some have derelict, leaking shabby shacks. Possession of a tolerably good building is an essential requirement of a school. If buildings could not be provided it would be worthwhile to use the buildings of the youth dormitories, wherever they exist. This will also help create pride in the students' mind for their social institutions.

The community participation in the activities and programme of the schools is at its lowest ebb, partly because the tribal parents are disinterested in what goes on in schools, and partly because schools do not have any communication with them. If schools in tribal areas are to deliver the goods an active participation of the parents is essential.

Schools in tribal areas lack teaching aids and equipments. There is nothing in them which can draw and hold the interests of the tribal children. Provision of audio-visual aids, which are now unheard of in tribal schools, may help solve some of the long-standing and vexing problems of education of tribal students.

One of the irksome problems of the tribal education pertains to the medium of instruction. Though there are a number of tribal dialects, some of them fairly well-developed yet, with a few exceptions, none of them is used as the medium of instruction. Tribal students are taught through the medium of regional language which, in most cases, is not understood by them. This leads to their poor performance in examinations and a huge wastage and stagnation. This is one single factor, more than any other, which considerably retards the progress of tribal education. Protests have been voiced from many tribal areas against the regional language being used as the medium of instruction. Using the tribal languages, at least those which have more than one lakh of speakers, could go a long way in solving this vexing problem. Other allied problems will then automatically be solved.

There would be a general agreement that the present curriculum of primary schools needs to be thoroughly overhauled. The need for the same is far greater in the tribal areas. The present curriculum does not project the cultural values of the tribal people. It includes such subjects which are quite alien to and beyond the comprehension of normal tribal students.

While formulating a curriculum, the mental capacity of absorption

of the body of knowledge intended to be given needs to be duly considered. Instead of linking the content of primary school education with the curriculum of middle schools, and of middle schools with that of high schools and so on, it would be desirable to link them with the mental capacity of the students at a given stage. While conceding that the imparting of the knowledge of science and technology in this age is unavoidable, it may be suggested that the curriculum should be formulated according to the cultural requirements of the tribal students. In brief, it may be said that the new framed curriculum may be science-oriented but culture-based.

The economic aspect of education would be an important consideration, while discussing the special problems of tribal education. Due to economic pre-occupation of the children, parents have not been able to give priority to their education. Even though it is difficult to suggest as to whether education is the cause or effect of a sound economic condition, it is almost certain that education cannot wait till the economy of the concerned people has improved. Both will have to improve together and supplement each other. While it is desirable to give economic incentives to students to begin with in the prosecution of their studies, it would be suicidal to compensate the parents for the economic loss sustained by them in sending their children to school. If this practice is encouraged it would be impossible to get children for schooling unless their parents are compensated. It would then become a business proposition rather than a scheme of educational development.

The position of a tribal student is really unenviable. With the age of a child he has the worries of an adult. He has to look after younger siblings, assist his parents in their economic pursuits, attend school and study at home without any satisfactory arrangements of light, reading and writing materials, and academic guidance as his parents are often illiterate. It is no wonder that a vast majority of them dropout. Even if we have to give the attention to the quantitative improvement of their education without going in for quality, concerted efforts will have to be made to take the cares of the students away. A system of group-coaching at home of tribal students is a matter of dire necessity. Such arrangements exist for tribal examinees appearing at public examinations, but that hardly solves the problem of primary school students. This system may be given a trial at the lowest level.

In the last decade or so the aspirations of the tribal students have gone up very high, higher than those of the non-tribal students due to various kinds of socio-economic and political changes brought about in the tribal societies. But the means to satisfy these aspirations have been limited. This has led to frustration and discontent. The

present system is unable to meet their social and cultural requirements. While there has been considerable change in all other aspects of tribal life, the system of education is still outmoded. Unless it conforms to the present requirements of the tribal students and is able to meet their socio-economic needs, it is bound to remain more as a means of futile mental exercise rather than a harbinger of socio-economic betterment of the tribal people.

A scheme of searching the talented tribal students is overdue. Many talented students have to discontinue their studies due to various socio-economic compulsions. The scheme may be initiated at the primary stage and really brilliant students may be helped in all respects to continue their studies till they pass the higher secondary examination. At this stage diversification of their future courses may be decided upon according to their aptitude and the need of the tribal societies. Some may be sent for teacher training, some for medical courses, some for training in the modern methods of agriculture. They should be given all financial and academic assistance till they complete the given courses with the proviso that they will have to serve in tribal areas for a specified number of years. This scheme will have a double advantage. The talents of the brilliant students could be gainfully developed alongside meeting the great need of teachers, doctors and agricultural experts in these areas.

Due to a general lack of awareness the tribal students do not know what courses are available where and what would be best in their interest. Thus, the need for an educational and vocational guidance bureau in tribal areas cannot be overemphasized. This would help them choose their educational courses and professional careers.

It may be emphasized that if the suggested steps are taken many of the acute problems of education of the tribal people may be solved.

Tribal Ashramas and Their Evaluation

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A PART OF my study of Tribal Education in M.P. is presented here. The first part deals with Vindhya Pradesh and the second with Madhya Pradesh. Madhya Pradesh has about 66 lakhs tribals out of its total population of 3 crores. An Ashram is a residential school meant for children from distant areas. Conceived by late Thakkar Bapa, the first Ashram was opened in Satna in July, 1946. Later on 15 Ashramas were opened by the Harijan Sevak Sangh and 5 by Bharatiya Adimjati Sevak Sangh. In the beginning they were run by non-official bodies but when they were found deficient in the proper maintenance of accounts, keeping a strict control on Ashram inmates etc., the Government took them over in 1954-56. Thereafter the number of inmates was fixed at 25 up to 5th standard. The primary education syllabus was adopted and primary school certificate examination was held by the Department of Education.

Ashramas for Scheduled Tribes are located in Sahdol, Panna, Sidhi, Satna, Chattarpur and Tikamgarh districts. They are for boys. For girls, the two Ashramas are located in Sahdol and Sidhi districts. Ashramas for Scheduled Castes boys are located in Datia, Rewa, Chattarpur and Tikamgarh districts and for girls in Rewa, Satna and Chattarpur.

The life in these Ashramas begins with morning prayer followed by 30 minutes exercise. Thereafter from 9-12 noon children study academic subjects. After 2 p.m. i.e., after lunch and rest they learn craft, gardening etc. After dinner at 7.30 p.m. they are supposed to go to bed at 9.30 p.m. The daily programme of these Ashramas is very tight and the life appears like that of a reformatory. Children hardly get time for their personal hobbies or tastes. Most of these Ashramas are located on the roadside and the buildings being rented are ill-lighted and poorly ventilated. In fact both because of heavy traffic which

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disturbs their life and poor living conditions it is suggested that these Ashramas should be located near tribal villages and their inmates be provided facilities to visit their families on festivals and holidays. They should be spacious and hygienically built.

The curriculum of the Ashramas is patterned on Basic education which includes (a) Varna Mala, (b) Arithmetic, (c) General Science, (d) Social Studies, (e) Physical Education (f) Crafts like spinning, gardening, Bamboo work etc. The medium of instruction is Hindi which is very close to their mother tongue, Baghelkhandi. These Ashramas are open to caste-Hindus also so that these children do not suffer from any complexes. This attempt was only a partial-success.

The inmates are in the age-group 7-13 years. Most of them joined these institutions directly from home and had no other educational experience. The teachers of these Ashramas on whom the inmates depend for guidance are Intermediate or below. Most of them are merely middle pass. They are neither trained nor offered any orientation programme. Needless to say both are very necessary for their success. However, teachers giving vocational education are all trained. It may be remembered that seven of these institutions are more for giving vocational education than theoretical training. They are located in Sahdol, Chattarpur, Tikamgarh and Panna districts. The purpose of these Ashramas is to both educate and make children self-reliant. It has been observed that in vocational Ashramas children are young and do not know how to handle the tools and implements provided to them. It is suggested that vocational education should start when children are mature enough for this training and that difficult crafts should not be introduced at this stage. The tools used for training should be close to their actual life situations. For instance; these tribals use axe as the only instrument for making things. But in Ashramas they are given all sorts of tools which are unknown to them. The teachers should therefore familiarize themselves with tribal tools and teach them their uses.

For girls, subjects like doll making, toy making, glass level work and weaving be introduced in the elementary classes. They may also be exposed to home science subjects like sewing, knitting, carving etc. Vocational education should start from the middle school stage onwards.

In the Madhya Bharat region the tribal welfare department is running 33 Ashramas in 12 districts. The districts are : Ratlam, Hoshangabad, Ujjain, Morena, E Nimar, Bhind, Shivpuri, Shahajpur, Seoni, Shohore, Guna and Jhabua. The activities in these Ashramas and Community welfare centres are for boys and girls, and adults and pertain to carpentry, brick and tile making, poultry farming, Ayurvedic work,

maternity centre and veterinary treatment.

The life in this Ashram begins early and continues upto 10 p.m. which includes prayer, cleaning of Ashram, taking meals, study and games. Though elaborate, this schedule is not followed strictly. Therefore, it is not very boring. When interviewed the children showed their love for this schedule as it had become part of their life pattern. The need for restructuring and modifying this schedule for Bhil children however remains unfulfilled.

The supervisors have to do their job according to prescriptions of the department. The schemes meant for the welfare of the Tribal Communities should be implemented according to the needs of the local people. This is, however, seldom done. Teaching them such crafts which have no local market is useless. Number of schemes have failed because they did not follow this simple principle of need.

Prayers sung in Sanskrit, though musical, are generally repeated without understanding. To remedy this, a few prayers have been prepared by our cultural Field Organiser. The themes of these prayers are secularism, fraternity, nationalism etc. Some of them have been borrowed from Ashram Bhujanwadi. The children should be free to put on any dress. Normally the dress they put on is not different from the dress of other children in the locality. The teachers of these Ashramas wished these children to put on a uniform to give them *esprit de corps*. As this uniform is given free, parents also do not object. The only objection is that if these children get accustomed to this uniform they will find it difficult to live in their community after they complete their education. It is, therefore, suggested that the dress of these children should not be prescribed. They should be allowed to wear their community dress, viz., *Kabza* and *Dhoti*.

It has been repeatedly suggested that this education should not completely alienate children from their own people. The change should be slow and not abrupt. The Dhebar Commission had suggested that the atmosphere of the school should be kept tribal by its structure and decoration done on tribal lines. The children should be taught about the birds, people, vegetation of the locality. They have gradually to come up to the national standards.

The children in these institutions have been found to fail in their terminal examinations. The reason given is their sudden uprooting from their home environment. It is, therefore, suggested that the Ashramas should form a link between tribal home and the larger community. There should be no abrupt change dislocating their life patterns. Therefore, the concept of community school be developed. Here the children should be trained to become useful members of society. For instance, by training them in poultry farming these children can

render useful service to their community. Basic education syllabus should be framed and textbooks written in their own language. As these children have to be brought up to national standards there should be no special syllabus prescribed for them. This is the common opinion of the Renuka Roy Committee, Elwin Committee and Dhebar Commission. The children should go to these tribal villages and learn and live their life. This will make their change gradual and they will thus not lose their footing in their community.

I suggest a few do's and don't's for the teachers and officers of the Tribal Welfare Department

- (a) For the improvement of teacher community relationship form PTAs, hold regular meetings, adopt a village, and appreciate tribal culture.
- (b) Keep the school building neat and tidy. School should be made the centre of the community. Wall decoration depicting tribal themes, games and gardening be encouraged.
- (c) Discipline of the children can be maintained by introducing only those conduct rules which do not contradict their customs. Teachers should also follow these rules.
- (d) Teach children through their dialect and through examples from their tribal life.
- (e) Boys and girls should be given freedom within local frame-work. They should be allowed various games and sports and the recreational programmes should be based on local culture.
- (f) The department of Tribal Welfare should organise orientation courses for their teachers. These teachers should also be trained. Such teachers should be given preference who know local mores and tribal dialects. Cumulative records be maintained.

The children should be made to love their own culture and also the Indian people as a whole. Thus can they be nationally integrated.